ERIC Document Resume	See Instruction Sheet	DATE OF RESUME	DATE RECEIVED

A. PUBLICATION DATA

1. ERIC NUMBER: ED001809
2. ORIGINATOR CONTROL NO(S).: NA
3. IDENTIFICATION NO.: OE-30014

DO NOT WRITE IN SPACE BELOW

MICROFILM COPY AVAILABLE YES ☒ NO ☐

COPYRIGHT GRANTED YES ☐ NO ☒

COPYRIGHT RELEASE FILED YES ☐ NO ☐

TYPE OF REPORT
- PROPOSAL ☐
- IN-PROGRESS ☐
- FINAL ☒
- FOLLOW-UP ☐

OTHER ERIC REFERENCES:

ERIC SATELLITE CODE

4. AUTHOR(S): Cutts, Warren G.
5. TITLE OF DOCUMENT ABSTRACTED: Teaching Young Children to Read
6. PUBLICATION TITLE: NA
7. EDITOR(S): NA
8. PLACE OF ORIGIN: Office of Education
   ORG. Department of Health, Education, & Welfare
   CITY, STATE Washington, D.C.
   TELE. EXT.
   INST/LOC CODE
9. PUBLISHER OR SOURCE: U.S. Government Printing Office Washington, D.C.

10. VOL.	11. PAGES	12. MO./YR.	13. TOTAL PP.
NA	NA	1964	138

B. INDEXING DATA

14. SUBJECT AREA

15. TYPE OF ENDEAVOR: report

16. INDEXING TERMS (6-12)

beginning reading	reading instruction	kindergarten	
reading readiness	pre-school	language experience	
pychological factors	reading trends	reading practices	techniques

17. ABSTRACT (MAX. 250 WORDS)

A conference on beginning reading instruction was attended by professional authorities and leaders in the field of reading and related discipline areas. The purpose of the conference was to report on research in Canada and England, as well as in the United States, and to review a variety of practices in elementary reading. The bulletin was designed to aid in understanding new developments and to prompt a deeper study of the problems associated with beginning reading.

An historical review of trends in beginning reading since 1900 was included. Particular attention was given to current reading practices. Reports on recent experimental programs and research studies presented findings in such areas as reading readiness, preschool reading instruction, reading in kindergarten, use of the Augmented Roman Alphabet, and the language-experience approach to reading. Possible future trends in beginning reading instruction are seen from the points of view of a research director, a curriculum planner, a teacher educator, and a reading specialist.

ERIC No.

18. SOURCE OF ABSTRACT

C. FUNDING DATA

19. SUPPORTING ORGANIZATION

20. DIVISION OR DEPT.

21. CONTRACT NO.

PROJECT NO.

22. TOTAL COST OF PROJECT

23. DURATION OR PROJECT

U.S. Department of Health, Education, and Welfare
Office of Education

3

ERIC Form 1

REPRINTED BY PERMISSION
U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN PRINTED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

OE-30014
F. 2

ED001809

TEACHING *Young Children* TO READ

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
Office of Education

HIGHLIGHTS

FUNDAMENTAL SKILL—The art of reading is essential and fundamental, and the teaching of reading is uniquely the responsibility of the school.

✦ ✦ ✦

COMPLAINTS NOT NEW—An examination of educational literature from 1910 to 1920 reveals complaints—frequent, recurring, and clamorous—concerning the large number of elementary children who were not learning to read and particularly about failures in the first grade.

✦ ✦ ✦

DRAMATIC ERA—The period between 1920 and 1930 was the most dramatic era in American history in its effect upon teaching young children to read.

✦ ✦ ✦

TIME FOR REAPPRAISAL—We should now challenge every important component or characteristic of basal reading programs, both old and new.

✦ ✦ ✦

HELPFUL POLICY—Results from exploratory research should be confirmed before they are released to the profession.

✦ ✦ ✦

A READINESS ESSENTIAL—An environment that provides the child with many opportunities for varied sensory and motor experiences is an essential aspect of readiness for beginning reading instruction.

✦ ✦ ✦

READING IN KINDERGARTEN—More than a fourth of the school systems with kindergartens operate planned, sequential reading programs in the kindergarten.

✦ ✦ ✦

TEACHER MAKES THE PROGRAM—There is nothing gained in condemning materials. In the long run, good teachers will use and adapt available materials to the needs of children.

✦ ✦ ✦

LANGUAGE EXPERIENCE—Language development requires more than fitting someone else's answers to someone else's questions.

✦ ✦ ✦

HEARING vs. VISION—Most beginning reading difficulties are essentially *auditory* failures, rather than visual failures.

371.3Ee.2

ED001809

OE-30014
Bulletin 1964, No. 19

TEACHING *Young Children* TO READ

Proceedings of a Conference, November 14–16, 1962
U.S. Department of Health, Education, and Welfare
Office of Education

Edited and prepared by

Warren G. Cutts
Specialist for Reading

Educational Materials Laboratory
Office of Education
MAY 1964
DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Office of Education

CONFERENCE PLANNING COMMITTEE

WARREN G. CUTTS, *Chairman*
Specialist for Reading

HELEN K. MACKINTOSH
Chief, Elementary Schools Section

LILLIAN GORE
Specialist for Early Childhood Education

●

This report does not necessarily express the views of every participant at the conference and is not intended to be a statement of policy of the U.S. Office of Education. It is published by the Office of Education in the hope that it will stimulate widespread and responsible discussion of the issues that occupied the attention of the conference.

●

Superintendent of Documents Catalog No. FS 5.230 : 30014

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1964

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C., 20402 - Price 55 cents

Foreword

Teaching Young Children To Read is based upon a conference on beginning reading instruction which brought together professional leaders in the field of reading and related disciplines. Their purpose was to report on research and to review a variety of practices in primary reading. They attempted, where possible, to discover a compatible and workable framework encompassing the best instructional approaches within divergent points of view.

In one sense this publication is an open forum in which authorities with various backgrounds and beliefs have pooled their knowledge and understanding of children and reading instruction. It is international in its scope, bringing together reports from Canada and England, as well as from the United States.

Keynoting the conference and this publication, one of America's foremost reading authorities gives a historical review of beginning reading practices since 1900. Next, a psychologist presents insights concerning the child from 3 to 8, with implications for reading instruction.

Experimental programs and research studies presented in the proceedings include the Augmented Roman Alphabet experiment in London and a study involving new materials in Canada, as well as Denver's experiment with 5-year-olds and San Diego County's language-experience approach. Also included are the dimension and scope of reading programs for young children and a report on current practices in the United States, plus a look at the future through the eyes of a research director, a curriculum planner, a teacher educator, and a reading specialist.

This bulletin should add to the reader's understanding of new developments in reading instruction and prompt him toward a broader and deeper study of the problems associated with beginning reading.

J. Dan Hull,
Director,
Instructional Programs Branch.

Eric R. Baber,
Assistant Commissioner,
Division of Elementary
and Secondary Education.

BLANK PAGE

Contents

Page
Foreword III
Welcoming Remarks . . . . Wayne O. Reed 1
Deputy Commissioner of Education

OVERVIEW OF TEACHING PRACTICES, PAST AND PRESENT

Trends in Beginning Reading Since 1900 . . Nila B. Smith 5
Current Reading Practices in the United States . . . Mary C. Austin 16
The Child From 3 to 8, With Implications for Reading . . . Frances Ilg 21
A Modern Reading Program for Young Children . . . William D. Sheldon 31

EXPERIMENTAL PROGRAMS IN ENGLAND AND THE UNITED STATES

Beginning Reading With the Augmented Roman . . . John A. Downing 41
Reading in the Kindergarten . . . Joseph E. Brzeinski 50
The Language Experience Approach . . . . R. V. Allen 59

RECENT RESEARCH ON BEGINNING READING INSTRUCTION IN THE UNITED STATES AND CANADA

Learning Factors in Beginning Reading . . . . Donald D. Durrell 71
Children Who Read Before First Grade . Dolores Durkin 78
The Language of Elementary School Children . . . Ruth G. Strickland 85
Explorations for Instructional Design in Early Reading Programs . . . . A. R. MacKinnon 93
Young Children's Thinking and the Teaching of Reading . . . Millie C. Almy 97

A LOOK AHEAD

Page
By the Reading Specialist . . . . Arthur I. Gates 105
By the Teacher Educator . . . . Amy Hostler 117
By the Curriculum Planner . . . . . . Grace A. Dorsey 122
By the Research Director . . . . . . Helen M. Robinson 127

Appendix. Conference Participants 133

WELCOMING REMARKS

Wayne O. Reed
Deputy Commissioner
U.S. Office of Education

We can hardly overestimate the importance of teaching young children to read and to love good reading. There are hosts of good enterprises in which schools and teachers should participate if personal growth is to be rich and full, and if our society's requirements are to be met. But of all these undertakings, the art of reading is essential and fundamental, and the teaching of reading is uniquely the responsibility of the school. We should, therefore, always give it highest priority.

There is another kind of uniqueness which one notes in this conference. It is inspiring to see assembled here so many of the great contributors to the science and art of teaching children to read. This conference is a unique example of the contribution that can be made when the leaders in an important field of education come together to hammer out consensus and to shape sound patterns that will guide the practices of many thousands of teachers.

You are addressing yourselves to major questions of technique and management which need to be answered as fully as present knowledge permits. It would be out of place for me to presume to comment on these questions, and you may think me naive to mention additional matters. But vital concerns press upon me when I consider the great task of building into the lives of boys and girls a literacy that is vital, constructive, lifelong, and deeply satisfying. To me, the spiritual aspects of reading and their concomitants are of the highest importance.

A child is fortunate, indeed, if his teacher has the necessary knowledge and skill to guide his growth in reading; but such knowledge and skill may not suffice. If a child has parents and teachers who are devoted lovers of good reading, his future as a reader may already be assured. But what of the many boys and girls who come from homes where time spent in reading is not highly prized and where good books are not eagerly sought as essential nourishment for active minds? And what shall we say of those schools whose teachers are not noteworthy and exemplary for their devotion to reading and to the use of books for their own growth and enjoyment?

I would hope that your deliberations might lead to a stimulating and clarifying expression of the soundest ways to provide for the needs of the child who now lacks the daily inspiration and example of adults for whom good reading is a way of life. Somehow, we must achieve a climate of learning which nourishes deep, personal interest in reading.

We live in a day when devotion to wholesome and constructive reading can no longer be regarded merely as one among many optional avenues to personal pleasure. The printed page now has a very special relationship to every person's problems and responsibilities. We live in a tumultuous and increasingly noisy world. We are continually bombarded with strident, impetuous, and conflicting demands on our time, our purses, and our loyalties. This sort of atmosphere does not make for the deliberate thoughtfulness, the calm judgment, and the stable integrity which our dynamic society sorely needs today. For these purposes the printed word is a free society's finest teaching medium. In these times, as never before, devoted and competent readership is the indispensable attribute of every citizen.

Overview of Teaching Practices —Past and Present

BLANK PAGE

TRENDS IN BEGINNING READING SINCE 1900

NILA BANTON SMITH

WHEN THE TWENTIETH CENTURY DAWNED it found children entering first grade at 6 years of age chronologically. They were taught reading immediately and all of them used a basal reader.

Memorization of the alphabet as a first step had disappeared by this time, but in most schools children were initiated into reading through drill on phonic elements. The Ward Readers, the Gordon Readers, and the Beacon Readers were popular. These readers subordinated both method and content to the teaching of phonics.

It is true that there were some readers at this time that required children to memorize a story or rhyme and then to break it into smaller units including phonics. The strong trend, however, was a continuation of the elaborate phonetic approach that had been advocated in the 1890's. The following quotation from Pollard's manual [1] explains this approach:

> Make reading of the first importance. As in music, let there be scales to practice; drills in articulation; a thorough preparation for reading before the simplest sentence is attempted.
>
> Instead of teaching the word as a whole and afterward subjecting it to phonic analysis, is it not infinitely better to take the sounds of the letters for our starting point, and with these sounds lay a foundation firm and broad, upon which we can build whole families of words for instant recognition?

---

[1] Rebecca S. Pollard. *Pollard's Synthetic Method, A Complete Manual.* Chicago: Western Publishing House, 1889, p. 3.

An intelligent appraisal of current teaching practices and needed research requires the broad perspective provided by an understanding of trends in reading through the years. Just such an overview is presented by Dr. Smith who reviews beginning reading instruction and research trends since the turn of the century.

Dr. Smith is one of America's most respected authorities on reading. For many years professor of education at New York University, she recently became distinguished professor in the New Jersey State Department of Education. In her new position she will assist all of the New Jersey State colleges in developing and improving their reading programs. Dr. Smith is also president of the International Reading Association.

This philosophy largely governed phonics instruction in the early 1900's.

Briefly, then, there were two strong trends during the period: Starting all children to read from a reader immediately upon entrance into first grade, and a heavy emphasis upon phonics, largely of the isolated, drill type.

In addition to these trends, there were significant influences which presaged marked changes in the following decade. Dewey published his most important books between 1906 and 1916. Their impact was immediate. In these books Dewey emphasized again and again that the maturation levels of children must be regarded. For example, in *Schools of Tomorrow*,[2] he said: "Maturity is the result of slow growth of powers. Ripening takes time; it cannot be hurried without harm."

Another pertinent influence which developed during this period was the emergence of the reading specialists as a new professional group. Huey's *The Psychology and Pedagogy of Reading*,[3] published in 1908, was the first professional book on reading. In 1915 William S. Gray began his illustrious career by publishing his *Oral Reading Paragraphs Test*.[4] With the advent of reading specialists, reading instruction was destined to receive much more careful study; and, since beginning reading was seen as a critical period in reading instruction, it was only natural that specialists should give particular consideration to this stage of reading growth.

Another development during this period had a profound effect in shaping later trends. I refer to the birth of the scientific movement in education. In 1909 Thorndike made the initial presentation of his handwriting scale before a meeting of the American Association for the Advancement of Science, and in 1910 it was published.[5] Generally speaking, the publication of the Thorndike scale has been recognized as the beginning of the contemporary movement for measuring educational products scientifically.

As a result of the strong new surge of interest in placing education on a scientific basis, together with its correlative motives for developing instruments of measurement, we would naturally anticipate that the scientific study of reading problems would move forward vigorously. This is precisely what happened.

---

[2] John and Evelyn Dewey. *Schools of Tomorrow*. New York: E. P. Dutton & Co., 1915.

[3] Edmund Burke Huey. *The Psychology and Pedagogy of Reading*. New York: Macmillan Co., 1908.

[4] William S. Gray. *Oral Reading Paragraphs Test*. Bloomington, Ind.: Public School Publishing Co., 1915.

[5] E. L. Thorndike. *The Thorndike Scale for Handwriting of Children*. New York: Bureau of Publications, Teachers College, Columbia University, 1910.

Through all the years up to 1910, only 34 studies had been reported in reading. During the 1910–20 decade, 200 accounts appeared, about 6 times as many as had been reported during the entire preceding history of reading. These studies had to do mostly with tests and school surveys, but these school surveys revealed a situation which was salutary in changing the character of reading instruction for young children.

An examination of educational literature during the latter part of this period reveals complaints—frequent, recurring, and clamorous—concerning the large number of elementary children who were not learning to read, and particularly about failures in the first grade. These concerns were verified toward the end of the period through the use of new tools of measurement. Standardized tests used in surveys revealed that an appalling number of children were failing in first grade.

These three influences that I have mentioned—the Dewey philosophy, the emergence of reading specialists, the first use of standardized tests—were not yet trends, but they influenced strong trends in the years immediately ahead.

Trends from 1920 to 1930

The period intervening between 1920 and 1930 was the most dramatic era in American history in its effect upon teaching young children to read. The cluster of influences which I mentioned as shaping up in the preceding period now blossomed and bore fruit. They brought revolutionary changes in attitudes toward teaching reading to beginners and drastic revisions in school practices.

For one thing, a totally new concept emerged in regard to the time at which children were ready to undertake reading, and a departure was made from the traditional procedure of starting all children to work with a basic reader on their first day in first grade.

In the *Nineteenth Yearbook of the National Society for the Study of Education, Part I*,[6] reading specialists recognized the "preparatory period" as one stage of growth in total reading development, and devoted an entire chapter to preparation for reading in the first grade before actual reading instruction. Just 5 years later another NSSE yearbook[7] disclosed that one in every six children was failing in reading at the end of the first semester in grade 1, and that one in eight failed at the end of the second semester.

---

[6] National Society for the Study of Education. *Nineteenth Yearbook, Part I.* Chicago: The Society, 1920.

[7] National Society for the Study of Education. *Twenty-fourth Yearbook, Part I.* Chicago: The Society, 1925.

In 1926 the International Kindergarten Union in cooperation with the U.S. Bureau of Education conducted an investigation on "Pupils' Readiness for Reading Instruction upon Entrance to First Grade." The first articles on this subject were published in *Childhood Education* in January 1927. Two of these articles used the term "reading readiness." Insofar as I am aware, this was the first time that this phrase crept into our reading vocabulary.

By this time school people everywhere began to awaken to the need for attention to readiness at the beginning level. A fire had been kindled, but it did not immediately burst into flame. A few schools accepted the practice of delaying reading for all children in first grade until they had gone through a preparatory period. Others questioned this practice. Investigators began to probe into the matter. A few master's theses and a trickling of articles on reading readiness appeared in the late 1920's. The new concept, however, was still in the formative stage.

In addition to the readiness concept, two startling new trends, developed in regard to method. Since the dawn of reading instruction, oral reading had maintained a supreme and undisputed claim over classroom methods. Furthermore, since the appearance of Webster's series of readers in 1778, the young child's first initiation to reading had been through the medium of a basal reader. Now, the experience chart made its appearance on the reading scene.

Part II of the *Nineteenth Yearbook*[8] was concerned with reading materials. Examples were given of charts based on children's experiences, and the practice of introducing children to beginning reading through the use of such material was advocated. However, this practice was not widely accepted until much later.

The other change in method was more spectacular. Oral reading was abandoned, and the concept of teaching silent reading burst into our slumbering complacency like a bombshell. This change of practice was due partly to the strong new emphasis on meanings in all aspects of education, but more particularly to the results of the new standardized reading tests which were coming into vogue throughout the country.

A reading test prepared for use with an entire class necessarily had to be a silent reading test, and a silent reading test had to check content. When administrators began giving these tests, they were shocked to find that thousands of children could not read and that most of the ones who could read knew little of what they were reading. The whole problem was blamed on the strong emphasis that had been placed upon what the educators of the time called "juggling with meaningless phonic elements." And, so, phonics was practically abandoned, and reading methods swung to the other extreme of an exaggerated emphasis on silent reading for meanings.

---

[8] National Society for the Study of Education. *Nineteenth Yearbook, Part II*. Chicago: The Society, 1920.

I want to reemphasize the fact that for many years we had been starting out young children with drill on phonic elements, divorced largely from interest and meanings. We have seen that this method broke down in the early twenties when standardized tests revealed that thousands of children were not learning to read. This was especially important in the light of current demands in some quarters for a return to phonics.

During the swing away from phonics, there were some people who even advocated a silent-reading approach for beginners. Emma Watkins, for example, wrote a professional book titled *How To Teach Silent Reading to Beginners.*[9] According to her method the children never said a word orally while learning to read. The teacher would show them a card with a direction on it such as "Come to class" and would read this direction to them when it was first presented. Following this presentation the children would simply carry out the direction whenever she held up the card.

Later, Buswell conducted a massive experiment involving the nonoral method in the schools of Chicago. His findings showed the nonoral approach to be just as effective as the usual way of teaching reading, with the added advantage of increased speed.

Because of widespread interest in individualized instruction at the present time, mention should be made of its development in the 1920's. The new, standardized tests revealed marked individual differences in all school subjects. Accordingly, some educators hastened to devise curriculums which would permit each child to progress at his own rate. Carlton Washburne in Winnetka, Ill., and Helen Parkhurst in Dalton, Mass., developed procedures and materials for individual instruction which were used widely throughout the country in first-grade reading as well as in other grades and in other subjects.

This period of reading instruction (1920–30) burgeoned with many ideas concerning the teaching of reading to young children. The advent of silent reading and the abandonment of phonics were sufficiently strong at this time to justify calling them trends. The readiness concept and the use of experience charts both were developing rapidly and gave promise of becoming trends during the next decade. Individual instruction for a time offered promise of becoming a trend but did not flourish. It was to reappear with vigor in the 1950's.

---

[9] Emma Watkins. *How To Teach Silent Reading to Beginners.* Chicago: J. B. Lippincott Co., 1922.

Trends from 1930 to 1940

The decade which followed might be characterized largely as one of extension and application rather than one of revolution and innovation. A deep concern for reading readiness now became a strong trend. Reading-readiness curriculums were adopted in most schools throughout the country, and investigators launched a vast amount of readiness research.

Published investigations on this topic increased steadily during each successive year of this decade, reaching a climax in 1940 when Gray[10] reported 22 studies on reading readiness in a single year. Since that time the frequency of such studies has decreased markedly.

The research of this period was sufficient in quantity and quality to yield significant information concerning the factors that contribute to success in beginning reading. Readiness for reading is undeniably associated with intelligence, with physical maturation and physical health, with social growth, with emotional maturity, and with experiential background. If there is anyone at present who labors under the misapprehension that reading skill develops in a separate compartment unrelated to other growth factors, he has but to examine the wealth of research on reading readiness which accumulated during the 1930's in order to find enlightenment.

The most spectacular event that occurred in the 1930's was the Activity Movement. This program was a direct outgrowth of the Dewey philosophy. In the activity program, children worked freely and spontaneously and actively in following their own interests, and many teachers became intrigued with the challenge of combining all their subjects into "units of work."

Upon entering a first-grade classroom at this time, one would be likely to find children hammering large pieces of wood, painting with kalsomine at easels, cooking simple foods, modeling lifelike clay figures, sewing garments for plays, building large structures for dramatic play—all in connection with their "unit of work." Reading done in these first-grade classrooms was largely concerned with experience charts, school-made booklets, and other cooperatively prepared materials growing out of the children's activities. Experience materials for reading now became a strong trend.

---

[10] William S. Gray. "Summary of Investigations Relating to Reading," *Journal of Educational Research*, vol. 33, February 1940, p. 5–54.

Although the name has been dropped because of unfavorable connotations, the activity program made a vigorous impact on the teaching of reading to young children—an impact so strong that its influence still continues. The Activity Movement distracted the school public from its age-old concept of schools centered almost exclusively on subject-matter goals to schools in which consideration is given to the child, his stage of development, his interests, his activities, his choices, and his decisions.

In summary, the trends to be recognized during this period were: General application of the readiness concept and strong interest in conducting readiness research, widespread adoption of the activity program, and practically universal use of experience charts. It should be added that, coincidental with the use of experience charts, the method of teaching reading to beginners was to have them read an entire story which they had composed, then to separate the story into sentences, phrases, and words. Phonics was not introduced.

Trends from 1940 to 1950

The world at war! The Armed Forces charging that too many American youth could not read well enough to follow military instructions; the public complaining because children were not learning to read; school people organizing clinics for remedial reading cases; children confused with the stress and strain, but intrigued with the prominence of boats, airplanes, tanks, jeeps, and guns, nevertheless wanting to learn to read and willing to be taught.

What happened to reading instruction in the midst of this disrupted scene in American life? The war years brought a strong new trend toward more intensive and systematic reading instruction. There was a rather abrupt movement away from the informal instruction associated with the activity program, back to an almost universal use of basal readers and to more systematic teaching of reading.

School people reexamined various possibilities of improvement and decided, among other things, that not enough attention had been given to phonics in recent years. Furthermore, several studies had been conducted in the late thirties which demonstrated the value of phonics instruction. The efficacy of phonics was removed from the realm of opinion, and phonics was now reinstated with renewed confidence but with a different timing, in a different method, and in combination with other word-attack approaches. Findings in regard to timing are pertinent insofar as teaching reading to young children is concerned. Two studies had indicated that children could not make the best use of formal phonics instruction until they had arrived at a mental age of 7 years. In the light of these studies, phonics was generally delayed until the second grade.

Children continued with chartwork. However, there was renewed emphasis on the use of basal readers in all of the grades, and readiness workbooks became a *must* for the beginning reader. The readiness concept had by this time become widely accepted; practically all schools had readiness programs. The subject was seldom mentioned in research reports or in periodical writings. No new trend was apparent in regard to readiness, unless it was the widespread use of readiness books for initiating children into a basal reading program.

For the first time in history, the preeminence of reading was threatened by other communication media. In this decade radios replaced reading lamps on the library tables of homes throughout the land. In 1949–50, television first invaded the living rooms of America and immediately captured the interest of children. A study conducted in 1950 revealed that, on the average, children were spending 21 hours a week viewing television, or as much time as they were spending in school. Television viewing by young children and by all children caused much anxiety. Certainly the wide use of mass communication by children became a trend at this time.

In summary, the trends from 1940 to 1950 were these: More intensive and systematic teaching of reading, the restoration of phonics except in the first grade, wide use of reading readiness books, and concern over the effect of other mass media on reading.

Trends Since 1950

As we move on to the present era, I feel that we are talking about a most exciting one. Never before has interest in reading been so intense and widespread. This period is not yet history. We are in the midst of it and too close to the situation to know which of the many influences may become trends. There are two influences, however, that are quite distinct.

As I see it, the major influence is public pressure resulting from the atomic age. The present effort to step up reading instruction, to produce more competency in a shorter time, is an offshoot of a larger motive and tempo which is controlling increased production in other aspects of American life.

Another influence which is affecting reading thought is the severe criticism of present methods which are being hurled by laymen and by professional people in other fields. Many of these critics are either *un*informed or *mis*informed concerning the history of reading and the results of reading research. Their chief contention is that we should return to the type of phonic instruction which was in use from 1900 to 1920.

As to trends resulting from these influences, I can mention only two major tendencies, omnibus currents as it were, which include many smaller interests and activities. These major tendencies are experimentation with a wide variety of approaches, and inquiry into present practices.

As we view experimentation with a variety of approaches, we can see that multiple methods for teaching reading are now undergoing experimentation. Numerous experimenters are seeking improved ways of teaching reading. There are phonic methods galore, and we hear of the television method, programed instruction, the linguistic approach, the individualized plan, the use of the Augmented Roman Alphabet, and so on.

From the historical point of view, none of these approaches is really new. They are using new conveyances for old or established methods. The various phonics methods, while having slightly different twists, are in the main patterned after procedures that were used in the 1910's and 1920's. The television approaches teach phonics or provide reading exercises of types used in earlier days; only the teaching medium is different. Programed instruction makes use of the workbook idea, which has been with us for years; the children are simply given the answers for self-checking purposes. The linguistic approach may contribute something new, but it has not done so yet. The individualized plan is a modernized version of what Washburne and Dalton advocated in the 1920's. The Augmented Roman Alphabet is new, but there have been other experiments in the past involving augmented alphabets. Even the Augmented Roman Alphabet does not involve a new method or procedure.

What I am trying to say is that we are not putting new wine in old bottles. We are putting old wine in new bottles. The substance is the same; the container is new. Speaking metaphorically, however, it is quite possible that the size and shape and color and textures of these new bottles will fit much more appropriately into the decor of the current scene. By all means let us encourage continued experimentation with these different approaches.

Now for the other major tendency of our times—that of inquiry into present practices. School people are inquiring, questioning, examining, and evaluating current procedures in terms of changed conditions. They are probing to discover what modifications should be made in the interest of better reading instruction. I shall mention briefly a few areas of concern and the types of questions which are being asked.

Reading Readiness Procedures

Many educators are asking, "Shouldn't this whole area of reading readiness be overhauled?"

More specifically, inquiries such as these are heard: Does a reading readiness test provide adequate information in determining readiness for reading? Is it possible to develop new and more comprehensive tools for use in diagnosis and prognosis? Do all children need a readiness or preparatory period upon entrance in the first grade? Do readiness workbooks really help to develop reading readiness? Could teachers do much more than they usually do in actually laying the foundation for *reading* skills during the readiness period?

These and similar questions are being directed toward reading readiness procedures as a part of the inquiry into present practices. They deserve attention.

Time of Teaching Beginning Reading

Many studies have been directed toward the proper age for beginning instruction. Whether or not to teach reading to the preschool child is the question in the minds of many people at present. Can preschool children learn to read? Is it desirable for them to do so?

Of course they *can* learn to read. Both Dr. Durkin and Dr. Almy, whose papers appear later in this publication, have found that many children read before they come to school. Back in 1926 Terman in his study of gifted children found that over 1 percent of his subjects learned to read before they were 3 years old, and that 2½ percent read before they were 5.

We have plenty of evidence that young children can learn to read. All of us know preschool children who are reading. There is no question in regard to whether or not they *can* read; the main consideration is whether they should be *taught* to read at an early age.

Those who advocate the teaching of reading to young children express their viewpoint in some such way as this: "Since there is a greater need for ability to read well than ever before, and since the schools are not teaching reading as well as they should, it is advisable to begin teaching preschool children so they will have a headstart when they enter school."

Those who oppose this viewpoint argue that the young child is not sufficiently mature physically and emotionally to withstand systematic teaching or reading without harmful results. They believe that childhood has its own needs which should be fulfilled before working with symbols. Winifred Bain reminds us of the present increase in life expectancy, expressing her concern in an article entitled, "With Life So Long, Why Shorten Childhood?"

Meeting the Challenge of Sophisticated Childhood

Are we providing the young child with reading materials which challenge his present-day knowledge and interests? This question is being raised more and more frequently.

The child of today *is* sophisticated. There is no doubt about that. His interests, experiences, and concepts extend far beyond the doorstep of his home and contacts with the milkman and the postman. The radius of his community is broadened to new horizons through the family automobile, his personal contacts with other peoples and places, and the vicarious experiences provided by television.

The young child's interests are more mature than ever before, and we now realize that his oral language includes all the sentence patterns used in adult life. And, yet, the majority of schools start him out reading "Shep, Shep, Good Shep," or something similar. Is it really necessary from the teaching and learning standpoint to confine beginning reading to two-word sentences and high frequency words? Maybe it is, and maybe it isn't. We cannot say with certainty, but this practice is being questioned by many at this time.

As a historian I have attempted to summarize the trends of the past 60 years. I trust that this summary will lend perspective to the discussions that follow. As the keynote speaker, I have tried to mention at least some of the current approaches and problems which will be discussed shortly by my very competent colleagues. I am certain that all of us will profit greatly from this exchange of ideas.

CURRENT READING PRACTICES IN THE UNITED STATES

MARY C. AUSTIN

MANY FACTORS CONTRIBUTE to the need for continuous reappraisal of American education. Increasing demands for excellence, pressures from parents, and the rapid pace at which society is moving have all focused attention upon the teaching of reading to young children. This trend is not unexpected, since most educational reforms have begun with this age group.

Current interest in the education of 5-year-olds prompted the staff of the second Harvard-Carnegie study to survey beginning reading practices as part of a broader study of the conduct and content of elementary school reading programs throughout the United States. Specifically, the staff sought to discover the extent to which school systems provided reading instruction in kindergarten, the reasons given by school personnel for the inclusion or exclusion of such programs, and the nature of such programs.

Kindergarten Programs

Because not all school systems have kindergartens, the initial step in exploring these questions was to determine the number of the participating systems with kindergartens. It was found that nearly 75 percent of the 795 school systems which responded to questions about beginning reading practices operated kindergartens. Since this percentage is somewhat above the national average, we should note that the respondents represented the larger communities of 100,000 popula-

---

Dr. Austin, formerly a member of the graduate education faculty at Harvard University, recently returned to Western Reserve University as professor of education and will direct reading research there. Her paper presents results of the Harvard-Carnegie study of beginning reading practices thoughout the United States.

Primarily a quantitative report, Dr. Austin's paper also offers insights concerning certain questionable practices in connection with kindergarten reading instruction. Her findings, just as those presented in a later paper by Dr. Sheldon, indicate a trend to shift into kindergarten activities formerly identified with the first grade.

tion or more; however, a detailed analysis of the returns indicated that systems in cities of over 100,000 did not offer kindergarten training any more often than did the smaller cities in our survey.

Slightly more than one-fourth (26.8 percent) of the school systems with kindergartens offer reading instruction to children at that level. That is, 156 systems introduced reading to 5-year-olds. In the other 426 systems with kindergartens, planned, sequential programs in reading were not provided. A number of reasons were given for this latter situation. The one most frequently stated was that such a program was not in line with established policy based on a philosophy of child growth and development. Believing that action rather than abstract thinking is characteristic of the young child, these educators pointed out that 5-year-olds need opportunities in social situations with a wide variety of experiences to help them grow, not only in reading but also in other aspects of personal and academic development.

Additional opinions regarding the teaching of reading to young children were obtained from interviews with 407 educators in the 51 school systems which participated in the original field study. Views differed sharply concerning the advisability of formal reading instruction prior to first grade. Approximately half favored reading instruction in the kindergarten for those children who appeared ready to undertake it, but just as many totally rejected the idea of offering 5-year-olds any instruction beyond readiness. A few recommended that all kindergarteners be exposed to a formal program.

The 200 school personnel who expressed a qualified approval gave essentially the same reasons as the 156 systems which introduced reading to some boys and girls at this level: because many 5-year-olds are capable of achieving more than the school asks of them, beginning reading activities should be offered in a way to challenge their interests and potentialities. To accomplish this objective, several educators favored advancing children to first grade; others supported a program in kindergarten. None in this group would advocate "forcing" any child to learn before he is actually ready.

The 172 respondents who, on first being questioned, opposed the introduction of reading in kindergarten enumerated their various reasons. The ones offered most frequently were these: Formal reading instruction is not in keeping with the developmental needs of 5-year-olds; kindergarten teachers are not prepared to teach reading; and many State courses of study forbid such programs. Later, some in this group stated frankly that an informal approach at this level was not completely satisfactory, while several agreed that reading might be introduced in kindergarten, particularly for the more able children.

Twenty-four school people endorsed reading activities for *all* pupils in kindergarten. They pointed out that children usually bring to school speaking vocabularies and language skills more than adequate for beginning reading instruction, and that many have learned to recognize some letters, numbers, and words before school entrance.

Nearly half of the systems which offered a program of reading instruction beyond readiness in kindergarten did so for selected small groups of children within the class; one-third of them carried out instruction on a whole class basis and about 15 percent provided it for individual children as the latter appeared ready to undertake it. In most of these systems, formal reading instruction began during the second semester with daily time allotments ranging from 20 to 60 minutes, depending upon arrangements for grouping and the number of children involved.

Methods and Materials

More than a century ago Friedrich Froebel, the father of the kindergarten, understood the value of play and music in the education of the young. He expressed his philosophy as "Come, let us live with our children." Today, in the "Soaring Sixties," this same idea plays a dominant role in nearly 75 percent of the kindergarten programs examined by the Harvard-Carnegie study. Educators in these schools believe that there has been no change in children, but only the environmental climate in which they live. Therefore, they claim, a sound education should enable each child to adjust to this environment to his fullest capacity.

Teachers and administrators in schools which do not introduce reading in kindergarten are apparently concerned more with the development of general readiness for learning than with specific prereading activities. Classroom observations, for example, revealed that in most situations teachers recognized 5-year-olds as active beings who learn best while engaged in active, firsthand experiences. These teachers provide children with opportunities in which they could expend their energies, ask questions and receive answers, and learn through observation, conversation, and experimentation. To encourage verbal skills, teachers expose children to short trips, demonstrations, pictures, books, recordings, filmstrips, television, and resource people. Good listening habits are encouraged by stories, poems, show and tell times, impromptu dramatizations and puppet plays, and discussions. Informal in nature, these programs also help children to become adjusted personally and socially in group situations.

When a teacher finds that some of the children can read, she often arranges for them to read to her during the brief daily library period. Other reading occurs when the children read their own names, the titles of books, and labels on objects in the classroom. Some schools are even going so far as to assign children from the kindergarten to higher grades just for reading instruction; others who "read well" but whose immaturity precludes this sort of adjusted program remain in kindergarten and "read at home."

Examination of the data from the questionnaires and original field study brought to light other interesting information regarding the teaching of reading in the kindergartens of 156 school systems. Using an experience approach, teachers who were expected to introduce reading to young children attempted to capitalize upon children's interests in their homes, in the school, and in the immediate neighborhood, their friends, pets and toys, the seasons and holidays, and transportation and machines. Indeed, programs in many kindergarten rooms appeared very similar to those followed for years in good first grades in developing prereading and beginning reading skills. Specific work was given on auditory and visual discrimination of likenesses and differences in objects, pictures, and word forms; listening to and following directions; relating story events in sequence; using context clues to supply missing words that make sense; and others. During this period, also, varied and well-organized activities were provided to stimulate interest in written language.

As might be expected, many types of materials were utilized. Almost without exception the 156 systems reported the value of chalk and flannel boards. Charts and news stories were used extensively to develop basic sight vocabularies. Charts with colors and numbers, days of the week, flashcards with known phrases, pocket charts for rebuilding familiar stories, and labels on furniture were much in evidence before preprimers were introduced and while beginning books were being read. Teacher-devised worksheets were employed far more frequently than either commercially prepared materials or mechanical aids. It was of interest to note, however, that more than half of the 156 systems used workbooks and about one-third of them introduced basal readers to 5-year-olds.

That in their enthusiasm to promote reading skills teachers occasionally used questionable practices may be inferred from the following remarks heard during the field study: "We sound like broken records for a week, getting the children to learn the *m* sound"; "We don't group for instruction in the kindergarten because we have no seat work to give the other groups"; and "We have dumped experience and reading charts in most instances in favor of moving into the formal preprimers of the basal program."

Concluding Statement

Many perceptive interviewees indicated that their kindergarten programs were undergoing close scrutiny. Of immediate concern to these educators were the content of their programs, the provisions made for academically able children, measurement and appraisal techniques, and the quality and range of materials, particularly in literature and science. It became increasingly obvious that school people are seeking answers to such questions as these: (1) Do children who read in kindergarten maintain their apparent advantage in later grades, and are they more advanced in skills development at ages 8, 10, and 12 than those who began to read in first grade? and (2) Do these children enjoy reading as much as those who begin later?

In an aerospace age when educators are attempting to give more than lipservice to individual differences among children, the following queries are also relevant: (1) How can the optimum age for beginning reading be determined for each child? (2) How can differences in readiness be measured accurately enough to justify delaying instruction for certain individuals? (3) What levels of accomplishment can be expected of children with varying mental ages and/or socioeconomic backgrounds? (4) What results can be obtained when boys and girls are located in consistently favorable learning environments?

To answer these and other pertinent questions, research should be undertaken. Until definitive research evidence is available to show the need for a change in present practices, the great majority of school people throughout the country will continue to rely upon their present knowledge and philosophy in determining desirable educational objectives for young children.

In the meantime, a number of steps can be taken to clarify some of the existing confusion with regard to the teaching of reading to 5-year-olds. Each school system would do well to review and perhaps redefine its currrent thinking about child growth and development. Certainly, as a minimum, all kindergarten teachers must become better grounded in reading instruction if they are to appraise more effectively each child's readiness for beginning reading and to provide a school program adjusted to individual strengths and weaknesses. Only then will they be ready to say to children, "Come, live with us in our changing society."

THE CHILD FROM THREE TO EIGHT, WITH IMPLICATIONS FOR READING

Frances Ilg

All too often, I fear, we are prone to neglect the developmental aspects of a child's growth. We are likely to make our judgments according to where we think he *should* be. Or we try to push him along, to teach him, so that he will progress to where we *think* he should be.

It would be far better if we studied the child, determined his present development and achievement, and related them to what has gone on before. Then we could glimpse the future and could more readily provide what he needs and is capable of absorbing right now. Growth is, to be sure, a complex of three forces—age, individuality, and environment. Each must be considered both separately and together with the other two. Only then are we in a position to help a child grow in his own unity.

The ability to read is a case in point. This ability does not appear suddenly. It does not appear merely in response to a learning situation. The organism's preparation for reading is long and elaborate. Without the early nascent stages, the basis has not been laid for reading readiness; the beginnings go far back in infancy. The patting of a picture in a picture book at 15 months is an initial, crude step that includes both recognition of form and meaning. This response is refined into pointing at a picture by 18 months and, finally, to naming the picture at 2 years of age.

Dr. Ilg, a recognized authority on the psychology of children, is director of the Gesell Institute in New Haven, Conn. Her publications have been widely read both at home and abroad, and she speaks from many years of close association with and careful study of boys and girls of all ages.

Dr. Ilg believes that educators must pay greater attention to the developmental needs of children, not pushing them into situations and tasks for which they lack readiness. She warns that such children may seemingly achieve quite well in grade one when the constant stimulation of new beginnings carries them along. Some children, says Dr. Ilg, might profitably wait until the age of 9 or even 10 before receiving formal reading instruction.

This ability to look at pictures is an important step in recognizing a symbol of reality on the page. The young child not only shows his response by pointing and naming, but he also shows significant changes in his visual mechanism. We test these changes by throwing a beam of light from a retinoscope into the child's eye. We find that the eye shifts into a minus projection as high as −1.00 to −2.00 D., especially in the process of search. There is a definite release into less minus as the child points or names. This indicates that he is focusing well within the page. At an older age when the child is beginning to read, we find that the good readers shift their focus on a retinoscopic finding to −.50 to −.75 D. When this does not occur and when the scoping reveals a +.25 to +.50 D. finding, we know the child is focusing beyond the page. Children who focus beyond the page are more often than not poor readers.

Preschool Years

The early language ability of a child also gives us many clues to his expected progress in reading. Rapid, early language development suggests rapid early reading. Slow language development is very often correlated with slower progress in reading. If the combination of words into sentences is slow, you would also expect slow development in the reading of sentences. With children who wait as late as 2 or 3 years to acquire a vocabulary of single words, it is my opinion that we should expect very slow progress in reading.

Early interest in books and letters also portends early and good reading. A 9- to 12-month infant who picks up his baby books in preference to toys is, perhaps, disclosing an interest in being read to. This interest in books does not mean that he will not gaily tear up a paper book if he gets the chance, nor should we be alarmed over such destructive behavior. This paper tearing, which is enhanced by the paper being assembled in a book, is characteristic of his age. It does not mean that he will be disrespectful of books at a later age. I have seen a number of these young children who both loved books and loved to tear them who later became very fine book collectors.

The 2- to 2½-year-old often likes tiny things, tiny pellets, tiny cars, tiny books. You may find him walking around with a tiny edition of Kate Greenaway or Peter Rabbit, not because he is interested so much in the book as in its minuteness. And he loves tiny pictures. That is why he often likes a picture ABC book filled with little, separate colored pictures.

A more specific item that correlates more directly with reading is a child's interest in letters. As early as 2 to 2½ years, a child may go up to a bookshelf and point to the letters on the back of the books asking, "What dat?" I have found that the chances are good that a child with such a pronounced, early interest in letters will teach himself to read before he enters first grade.

The sustained ability to sit and listen to a story at 2 and 3 years of age offers a further clue to later good reading ability. When a child of 6 or 7 years is having difficulty in reading, it may be helpful to probe back into this earlier period to find out if he was able to sit still long enough to have a story read to him. My guess would be that he was not able to do so, that he bolted after a few minutes, and that he was a very active child. If we examined such a child with a retinoscope, we would probably discover that he was failing to register a good minus projection as he identified objects on a page; more than likely he would be scoping beyind the page into a +.25 to +.50 D. This is the type of child who has trouble with near vision—with near-point tasks. The child who has trouble in listening to a story is more likely to respond to a factual book, a book with good pictures of things he knows about and is interested in, such as trains, cars, trucks, and fire engines. The potentially good reader, on the other hand, likes not only these factual books, but also the more imaginative story in which he needs to project beyond the pictures, in which he needs to hold on to the thread of a plot.

Memorizing whole stories or especially nursery rhymes in the 3- to 3½-year-old period gives us a clue that good auditory recall may well be followed by good visual recall. The good memorizers, the ones who *seem* to be reading at around 5½ until they are checked on single words and are found to be memorizing the story, later become the good readers.

Learning Letters and Words

A fairly common age to begin to recognize letters is at 3½ to 4 years of age. It is interesting to watch the different patterns of learning characteristic of different children. Some recognize and choose only the round letters, as the *O*, *C*, *D*, or *G*. Others prefer letters with vertical and horizontal lines, such as the *T* and *H*. And some learn best by associating a letter with a word that has meaning for them such as *M is for mommy*, *D is for daddy*. The alphabet may already be gathering meaning for some. At least they enjoy singing the song about the alphabet, and they may know it by heart without knowing the letters separately.

When a 3½-year-old insists on looking at the page being read to him, he is beginning to relate pictures and words. This becomes a part of his listening and enhances his grasp of the story. This same child at the later age of 5 to 5½ can move from pictures to the recognition of single words. He likes to pick out or be shown words of strong impact such as *wow* or *oh boy*. He likes to pick out proper names that he has heard in the story especially because they begin with a certain capital letter.

Five adores anything to do with letters. He spells out words: *n-o*, *y-e-s*, or even a longer word like *m-o-m-m-y*. He intersperses these spelled-out words in his sentences and does this with such relish that he seems to feel that he possesses some marvelous new secret code. He is indeed at the gateway of a whole new world.

The child's progress in recognizing single words moves more rapidly at 5½ to 6 years. He is now beginning to recognize selected words on a page. But he is not interested in following a line of print. He prefers to move his eyes vertically. And he is interested in picking out certain words at random, ones which have meaning for him, ones which he has picked up in the context of the story as it has been read to him. He can read the word *Washington* as easily as *Jane* if the story is about Washington, and he can recognize this word because it begins with a *W*.

Immature Vision at 6

Six overcomes his unstable visual mechanism by keeping his place with his fingers. Sometimes as his eyes drop to the next line, he may drop too far and thus skip a line. He would profit by the use of a ruler as a marker. It is hard for me to understand why some teachers outlaw the use of a finger to keep the place, especially for 6-year-olds. When this habit still occurs at 8 and 9, of course, something is amiss and it may suggest the need for a visual examination.

As Six reads he often inserts words he has just read, especially adjectives, even though they do not recur. He loves repetition, often providing it for himself. This is why he finds repetitive primers so congenial to his temperament.

Six often gets his clues about a word from its initial letter and from its relative length. A word such as *mother* is recognized easily because it begins with an *m*. Six wants to know the sound of the initial letter. Everything about him shows an interest in beginnings. He is constantly making good starts. He wants to be first. But he cannot sustain his interest very long, and he is very poor at finishing. *It is important for a teacher to recognize that a child may do quite well in the first grade when the constant stimulation of new beginnings carries him along. But, alas, when the need for finishing at 7 is demanded of him, he may fail.*

Six still loves to be read to. Listening, I feel, is as much a part of learning to read as the actual act of reading itself. Unfortunately, parents stop reading to their children when they think it will hamper them from learning to read by themselves. The opposite is probably true; the more experience the child has with language and the written word, the faster will be his progress in reading.

A Look at 7-Year-Olds

The 7-year-old can fix his eyes more steadily on a page. He has developed marked improvement in his acuity and can read little letters with ease—in fact, preferring them. This is the time to introduce small letters. He is still likely to reverse certain letters such as *b* and *d* when he writes or reads them, but he almost always recognizes his errors and corrects them.

Seven is what we call a mechanical reader. His voice sounds mechanical as he reads aloud. He reads almost in a monotone with very little inflection as he links one sentence to the next and one paragraph to the next, not wishing to stop and work over a word he does not know. That is why he likes to be told a word when he does not know it. This is no time to interrupt his flow of reading, although he might guess at a word, since guessing is a quite typical 7-year-old response. Seven wants especially to hold on to the meaning of what he is reading, and this might be lost if he stopped to work over a word. This desire for meaning is so strong that he might read the word *surprise* as "birthday". There is a relationship here but not a visual one.

Seven drives to reach the end, to finish a task, even though it may be the hardest thing for him to do. Notice Seven's favorite words—*end*, *finish*, and *last*. Notice how he will even choose to be last in line in preference to being first as when he was 6.

8-Year-Olds Surge Forward

The release, relaxation, and flexibility that come at 8 years of age is a welcome change and so striking that it is as if a child had shifted to a higher gear. This change is soon evident in his reading. He develops a new capacity to attack words, new words which he has never seen. He can work them out phonetically, for he now knows the sounds of letters and combinations of letters and is able to put them together. He also sees the word as a whole in a flash. He not only sees the beginning and end of a word, but the middle too. He no longer has trouble with vowels. But the complications of double vowels and double consonants still may elude him.

Eight reads with expression. He knows how to pause, how to drop his voice at the end of a sentence. He no longer links sentence to sentence and paragraph to paragraph as he did at 7. He can now stop and work over a word in the middle of a sentence without losing the thread of the story. He can even stop to discuss what he is reading without losing his relationship to the story. He loves to read out loud to a group. He reads with greater speed.

Changes are also evident in his visual mechanism. He is now pushing out into space with a more flexible, totally operating mechanism. He has greater resiliency. He likes school, often for the first time. He is adjusting well to the group. He often considers his teacher a part of the group. If she can be caught in a mistake such as a misspelled word on the blackboard, she becomes one of the group. (A teacher should recognize this close potential tie and sometimes make a mistake deliberately, just so Eight can catch her on it. She is then really appreciated.) Eight often for the first time is reporting more fully about what is happening at school. Parents report that they no longer feel left out. This indicates that there should be closer communication between school and home, especially in the earlier grades when a child is a poor reporter.

Although this paper is primarily concerned with the child from 3 to 8, it is important for us to consider some characteristics of older children in order to understand more fully the younger child.

One of the outstanding forces that is operating at 8 is power of attack. This leads to very real changes at 9 and 10 years. Nine is an age that makes great demands on a growing child. His reading ability often advances rapidly. He now is more on his own. He is capable of going to the dictionary to look up the meanings of words. He comes to realize through the table of contents that a book is broken up into parts. He is beginning to know when he can skim and when he needs to read more thoroughly. He often prefers to read silently, although he still needs to be checked orally. Boys who have been slow or poor readers up to now, though they have earlier shown high interest and good comprehension, may now become good readers. Nine is eager for more and more information and is definitely interested in the different subjects at school.

By 10 a child is normally a proficient reader. He may also be a ravenous reader, sneaking books to bed and reading under the covers by flashlight. This behavior usually hits its peak at 11. Ten enjoys reading to his younger siblings and does so with good expression. He especially enjoys biographies and, most of all, stories about the childhoods of great men. He is beginning to read the newspaper and to keep up with daily events.

Symptoms To Study

In studying the process of learning to read, it is interesting to see if we can relate any outward manifestations of posture and behavior with the inner workings of the mind. Watching the child work with pencil and paper, watching his eye movements as he thinks, or his tongue movements as he writes, makes us aware of patterns related to age and quality of response.

Let us consider the 5-year-old. He sits erect. He moves his head mainly vertically. He does not shift his paper. His nondominant hand is flat, with fingers close together. This nondominant hand moves along beside the dominant hand as he writes. His eyes stare into space as he thinks. Notice how often older children who have difficulty in reading hold on to the restricted patterns of the 5-year-old. Their bodies do not take on new patterns of behavior. They are, as it were, sitting on a point with blinders on.

By 5½ the head starts moving from side to side, the eyes are more fluid, and the tongue sweeps from side to side over the lips almost in a contorted way. This breakup that begins at 5½ begins to gather a direction more surely in six. His head is more often tilted to the nondominant side as he writes. The paper is often tilted slightly. The nondominant hand is still flat, but now with fingers spread. The tongue is beginning to inhibit itself, but often pushes against the lower lip or cheeks. The eyes have wide lateral sweeps as Six thinks.

By 7 the shift of both paper and body is more evident. The whole nondominant side is more tense. The head is more tilted, often far over and down, almost touching the table surface. The nondominant hand is usually more relaxed and may pin down the corner of the paper with thumb and index finger. The tongue no longer projects. Rather, the lower lip is drawn in. Often this movement is so frequent that the lip becomes chapped. The eye movements shift obliquely upward. It is interesting to try to pick out the good readers in a second-grade class. My observation has been that they reveal eye movements sweeping obliquely upward as they calculate in their head, that they bend their head, far over to the side as they write and, most telling of all, that they have that pathognomonic sign of the good 7-year-old reader—a chapped lower lip.

By 8 the child's posture is less extreme. He is now working opposite the shoulder on his dominant side as he writes. His head is tilted to the opposite side but he sits erect. His mouth may be slightly open as he works. His eyes often roll as he thinks. This may well indicate his newly found sense of totality, his ability to take in a situation in one sweep. He also uses this rolling to enhance his dramatic tendencies.

A significant and interesting change takes place at 9 years of age. Nine may shift his paper almost a full 90°, until the vertical side is parallel with the table edge. His entire trunk is shifted to the nondominant side so that his feet are often placed to the side, even in the aisle. It becomes quite natural to trip others as they pass by.

Nine's dominant shoulder is thrust forward and his head is tilted to the nondominant side. He anchors his paper quite naturally halfway down the vertical edge. As he writes, his head moves through an arc from the nondominant to the dominant side, then back again as another line is traversed. His eyes have lost their roving and their rolling. Rather, they fixate a point with a sharp perceptual edge. This is not the staring into space that characterizes the 5-year-old. Five's outer space is vague as he stares. But Nine often says he likes to fixate his eyes on a point so he can think more clearly.

With this type of highly differentiated mechanism is it any wonder that Nine is so ready to achieve, is so penetrating in his search for knowledge? And is it not sad that a child who has not come into this stage, or whose mechanism is not capable of differentiating to this point, is expected to achieve with energy and enjoyment as does the highly differentiated Nine? No wonder the nonready child "falls flat on his face." No wonder nearsightedness is often the price a child must pay.

Interpretation and Application

We must learn how to use this developmental knowledge. But first this information needs to be documented and studied. Teachers and parents alike need to be made aware of these stages and manifestations. A short developmental examination could be administered to each child each year to find out where and how a child is operating. This would be most valuable in the early years—kindergarten, first and second grades—when much could be revealed about a child. An interview with the parents could give us valuable information about the child's growth in the early years. With this knowledge of and respect for the past, along with facing the realism of the present, there is no reason why we cannot plan more successfully than we now do for a child's future.

If, for example, we have a child who has been slow in his language development, who would never sit long enough to listen to a story in the preschool years, and who was always on the go, we are not facing reality if we expect him to sit down, pay attention, and follow directions in first grade, especially when he is only 6 or 7. He simply clutters up the classroom and becomes confused by all the meaningless instruction he is receiving.

We might also find that such a child has never shown any interest in letters, that as often as you direct his attention to road signs, his mind wanders away to something else. We might also find that his body, hands, and eyes do not make the shifts expected as he moves from 5 to 9 years. Often he has trouble with the oblique. Wholes are broken up into parts, and parts are often seen as wholes. His 5-year-old flat hand stays with him as he writes, through 6, 7, and 8 years. He quickly spots a bird on the wing but he cannot hold to near-point tasks.

Give him a machine and his mind works with facility and penetration. His electric train set is no longer a maze of switches, tracks, and complicated setups by 7 or 8 years of age. He manipulates a tractor with ease by the age of 8. But, he does not see those letters on the bus he has been riding day after day until he is 9 or 10.

Might it not be wise to delay formal reading for this type of child until he is 9 or 10, when there is something to work with? This does not mean that nothing is to be done during this 5- to 10-year period, but such children should be treated as though they were going through all the stages from 2 to 5 which they have not yet traversed. Above all, they should be read to or, better yet, be exposed to selective television at a 2- to 5-year-old level, but lifted to his realm of interest. We find that these boys, for they are mainly boys, learn their letters at 9, read words at 10, sentences at 11, and are doing a reasonably good job by 13 years of age. With them 13 is comparable to 7, when we normally expect a child to be well on his way in the art of reading.

My main plea is to learn first about the child. Know him, both in relation to his age and his individuality, and his unique way of growing. Place him in an environment in which he can move. Then, I feel, we cannot fail; nor can the child.

For the present, however, much research still needs to be done. This does not mean we are not already well on our way. With proper placement in school and emphasis on respect for the child, many of our questions will be answered. I feel that curriculum changes will then come normally, determined in large measure by the forces of natural growth and development.

A MODERN READING PROGRAM FOR YOUNG CHILDREN

WILLIAM D. SHELDON

SPEND A MONTH with me and visit kindergartens and first-grade classrooms in the schools in a Texas town, a Long Island village, a Los Angeles suburb, an upstate New York city, and then shift the itinerary to include a Canadian city, a Massachusetts village, and a suburb in Florida. You will come away from your visits confused by a bewildering view of programs which include methods, materials, and administrative grouping plans in which the only common denominator is the children, plus the fact that they are being led, sometimes pushed, into reading by teachers representing a variety of points of view and educational preparation.

If you were asked to describe what you had seen, you would understand my dilemma as I attempted to write a description of reading programs for young children.

Let me describe, for example, the activities of kindergartens I have visited in many schools in every part of the United States and in some schools in the Province of Ontario. These kindergartens which I visited did not resemble the kindergartens described in the books and articles written by specialists in early childhood education. As you recall, the ideal kindergarten was, indeed, a garden for young children. There was no hurry to learn, no demand to conform, no structure to confine, but instead a free-flowing, ever-moving, ever-changing little

---

Dr. Sheldon, professor of education at Syracuse University, is former president of the International Reading Association. His paper is based upon his personal observations in hundreds of elementary classrooms across the Nation and his wide experience as a workshop leader and director of inservice training programs.

Dr. Sheldon's caricature of current practices in kindergartens and first grades brings into even sharper relief some of the concerns expressed by Dr. Ilg, concerns which are further accentuated in a later paper by Mrs. Dorsey.

Following his insightful review of present practices, Dr. Sheldon offers his concept of a modern reading program for young children. He feels that the key to better reading is the teacher and that school systems must assume greater responsibility in upgrading instruction in reading.

world where children created with paper and paints, sand and clay, blocks and toys, in a constant activity of experimentation and exploration.

Kindergartens Contrasted

The children were as free as goldfish in an aquarium, confined only by time and room and the hidden agenda of an artful, well-educated teacher who, with great skill, helped the children move from disorder to order, insecurity to security, confusion to clarification, aloneness to companionship, and a gradual mastery of those first elements of communication—listening and speaking. Each child made progress on his own, and the only conformity demanded was a respect for one's neighbor and that neighbor's right to his own space.

The kindergartens we have visited more recently do not resemble the prototype just described. The agenda is no longer hidden but in plain view. On first glance, however, one would be at a loss to describe the changes that have made today's kindergarten so different from those of yesterday; if you remain for a while you will notice the changes. The children are quieter now, because one cannot shout if teacher is instructing a group in reading a chart story or is leading a few children through the pictures of a readiness booklet. All are quiet, as teacher holds up a picture and asks the children to tell her the word it represents, and then asks them to note the sound of the beginning letter or the endings that rhyme.

Tucked under a shelf we can find the picture readiness books and, just to make sure, the phonics booklets. The alphabet is easily viewed above the chalkboard, and wide-lined paper and crayons are ready for the children to use when they copy their names or letters or numbers.

Soon the teacher will use the filmstrip projector to show a picture story, and later the children will re-create the story in their own words. Still later, they will copy it from the chalkboard and read it to the teacher, taking notice of words which are the same.

No Nonsense Approach

And then we awaken with a start and realize that this is a kindergarten in name only. Activities which used to be observed in the first grade are now found here. The free-flowing unstructured environment created especially for the 5-year-old is gone. In its place we find a room full of busy, directed, and important hurry. "We don't wait for readiness to happen," they tell me; "we make it happen."

If we return in April we find the phonics picture books gone and now the *Big Book*, once the pride of the first group in the first grade, is wheeled into position in front of 12 "almost Sixes." There is no nonsense in the room now. Those children who are not seated in a well-ordered quarter circle in front of the *Big Book* are busy printing the text of their last experience lesson, or drawing lines from a word to another beginning with the same letter, or perhaps playing "Death Valley Lotto" with several classmates. He who makes a mistake and matches the wrong word with a picture is banished from the game.

We have drawn a slightly exaggerated picture, but only slightly, of the majority of kindergartens we now visit. The reading program begins in the kindergarten in fact. Readiness is taboo, and there is no room for idleness.

As we talk to teachers and administrators about the changes we have observed, we are told that the 5-year-old has changed. He is no longer a little helpless, bewildered infant, but a space urchin concerned about modern affairs and ready to be taught on a level commensurate with his maturity. When we ask, "What happened?" we are told of the wonders of television, the effect of other mass media on the young mind, the impact of travel, the hastening effect on learning of children's many new experiences. Teachers decry the obvious backwardness of the old-fashioned kindergarten in which teachers actually encouraged children to relax, to socialize, and to grow at their leisure.

Earlier research studies concerning the growth and development of young children are no longer accepted by teachers, administrators, and parents as pertinent to the education of today's children. Apparently we have been launched into an age when maturation in the physical, emotional, intellectual, and social areas can be hastened by a new no-nonsense approach for the 5-year-old.

The kindergarten program is changing and has already changed to a large degree. It is no longer separate in any way from the structured academic program of the primary grades. It is a very real part of it.

First Grades Little Changed

As we visited first-grade classrooms, we expected a similar revolution in methodology to be observable now that 5-year-olds have mastered the alphabet, beginning sounds of words, and contextual analysis; and have acquired an earnest attitude toward work. Yes, we did find some changes in the first-grade program, but not as much as might be expected.

The first-grade classrooms we visited are very similar to the first grades of yesterday. They are still dominated by the use of basal readers and the appearance of three instructional groups. The turtles have disappeared and are now "Johnny's group," but you know about Johnny. The basal readers, preprimers, primers, and first readers are used in 90 percent of the classes we visited. Scare headlines and the criticism of high military leaders and university professors have caused much phonics material to appear. On one table we find at least 30 boxes of phonic games to play. In a corner we see a rack and, hanging from its crossbar, a colorful chart with a picture of an apple representing the sound of *a* and a halibut, the *f* sound in fish. A pile of folded-over phonic workbooks represents the morning labor of one reading group; another group is now being instructed in the *ay* family.

In some classrooms there is evidence of a rejection of phonics books and games and basal readers. Every child is reading a book which he selected, and he reads at his own pace. The teacher sits next to the individual reader, listens to him read orally, and then moves on to the next child, noting the errors in word recognition as each child reads. The teacher plans to meet with small groups of children later to teach certain skills they have not yet mastered.

Conversation with a first-grade teacher is revealing. She ordinarily believes in a heterogeneous, self-contained classroom, and can teach three and sometimes four groups of children to read on or near their best level of instruction. Usually there is a favorite basal series for the larger percentage of children, but many have added a second or even a third series. About 5 percent of the teachers reject the basal readers as a beginning instructional tool, returning to them after the children have mastered word analysis skills through one of 26 currently available phonics programs. Approximately another 5 percent believe in an informal introduction of sight words through experience stories elicited from the children themselves, and then move the children into an individualized reading program as soon as possible.

Most of the teachers rely heavily on commercial products such as readers, manuals, and workbooks, not only for the materials of their program of reading instruction but for method and philosophy as well.

Programs? There are some coherent, sequential programs, developed by teachers and coordinated by intelligent and hard-working primary supervisors. In these programs, teachers are the creative designers of reading activities which make sense in terms of the needs of children. Articulation between kindergarten and first-grade instruction is aided by classroom visitations, discussions, and committee work on goals and objectives.

What I have just described is a condition of educational flux. Administrators—beset by all sorts of critics, besieged by salesmen, beguiled by educational messiahs, and needing additional experienced, well-educated primary teachers—are now busy sorting out the situation. They receive assistance from able supervisors, trusting parent groups, plus the occasional help and advice of a visiting expert. The willing, experienced teachers somehow remain sane and rational while the pieces fly by.

New Program Emerging

As we take an even closer look at the school scene, we see the beginning signs of a new program emerging. This program is still not in observable form, but the signs are sufficiently ample that what we describe below could be operational in the very near future.

No new reading program can ignore the parents, the home, and the immediate environment of the child. Some important projects of the great cities concern the upgrading of the home environment of disadvantaged children. We see evidence of efforts to expand the language facility of 4-year-old children. Communities are seeking ways to utilize procedures suggested by the disciples of Montessori. The fact that parents want to help their children develop a better language background is evidenced through the marked interest in several programs and demonstrations related to reading instruction for the very young. There is a possibility that the Denver experiment may suggest a way of helping to create a new language environment in the mass of homes. The use of television as a direct means of helping parents and very young children is just in its infancy.

We advocate the extension of the preschool clinic to include a comprehensive study of the language development and total social, emotional, and physical status of very young children. Among other devices, we are advocating the use of the time-lapse camera as a means of recording, for later analysis, the revealing activities of 4-year-olds during their first visit to our schools. We recommend that, while parents are being interviewed, the Fours be allowed to play while a photographer takes motion pictures of their activities. We need to know much more about our children so that our programs can be modified to suit the needs of 5-year-old children, rather than forcing them to conform to impossible school demands.

We do not see the age requirements for admission to the school being raised but actually anticipate that children will enter the schools at an increasingly earlier age. We do not view this early entrance with alarm because the 3- and 4-year-old can be provided with nursery school experiences which for many children are superior to the experiences the children now have in their homes. The Ottawa, Canada, schools have already developed a wide program for 3- and 4-year-olds which offers an excellent example of the positive role such programs can fulfill for the very young.

Shorter Vacations

We see the gradual abandonment of the graded primary as a very healthy administrative step which permits children to progress at their own rate without fear of failure just because they do not complete a certain book at a certain time. We envision an abandonment of the long summer vacation for those children who reach a crucial point in reading development and need a few more weeks of guided learning in order to attain skills which will insure mastery. At the present time many of the poorest readers in a first-grade classroom reach the end of the year with little or no independent skill in reading. Demonstrations in New York and Georgia offer evidence that five additional weeks of instruction can accomplish a great deal for youngsters who are almost ready to master enough basic words and analysis skills to give them a modocum of independent reading ability.

We expect basal readers to remain the skill texts of a total reading program, but recommend that school systems take over the role which teachers colleges were supposed to play in the past by helping teachers learn how to teach reading. We are convinced that the basic problem in the actual reading end of the language development is inept instruction by poorly educated teachers. We do not feel, however, that a continuance of this inability to teach reading is necessary. We are convinced that short workshops, taught by able supervisors through assigned reading and demonstrations, can raise the ability of teachers to teach reading.

New grouping procedures will develop as a consequence of the ungraded primary organization. We could learn something about teaching individuals from British teachers. The arrangement of rooms and the attitude of British teachers seems to facilitate an easy approach to individual differences with or without the use of basal readers. They see no necessity for attempting to make classes more homogeneous in terms of reading ability.

As for the materials of reading instruction, we think that the knowledgeable teacher can choose wisely among a wide range of useful tools for reading instruction. We would concentrate on educating the teacher in the proper procedures for teaching reading, those which allow each teacher to select the materials which best suit each child or small group of children. We would include multilevel materials, filmstrips, experience charts, teaching machines, trace books, phonic booklets, or basal readers. These can always be considered as the good instruments which teachers feel free to select and use in helping to meet the needs of the children.

There is nothing gained in condemning materials. In the long run, good teachers will use and adapt available materials to the needs of children. Less able teachers can be taught to use materials in a more artful manner.

We feel that the best reading program for our young children is one which provides for skill instruction at the proper level for each child, one which proceeds as fast and as thoroughly as possible, and one which uses reading as a means through which children learn the content of subject matter while at the same time deriving enjoyment from books. Such a program makes adequate provision for accelerating the skill development of the able, as well as adjusting to the needs of those children who, because of one or more factors, need corrective or remedial instruction.

Experimental Programs in England and the United States

BEGINNING READING WITH THE AUGMENTED ROMAN

John A. Downing

ʧicken-licken

wun dæ ʧicken-licken
went tω ŧhe wωdz for fωd.
whiel ʃhee woz ŧhær an æcorn
fell on her pωr littl hed.
"œ! œ!" sed ʧicken-licken.
"ŧhe skie fell on mie hed.
ie must gœ and tell ŧhe kiŋ."

One of the most fascinating experiments in beginning reading today involves the Initial Teaching Alphabet, a sample of which introduces this paper by John A. Downing. Mr. Downing is director of the Reading Research Unit of the University of London Institute of Education.

Both he and Sir James Pitman, father of the Augmented Roman Alphabet, shared their views with other conference participants. Only Mr. Downing's paper can be presented here, but it should be noted that so much interest has been aroused in I.T.A. that at least two large-scale experiments—one in the Greater Cleveland, Ohio, area and the other in Bethlehem, Pa.—will test this new teaching medium in the United States during the current school year. Other experiments with I.T.A. are being planned through the use of foundation grants and U.S. Office of Education funds.

As pointed out by Mr. Downing, the crucial test of I.T.A. will be the ease or difficulty with which experimental pupils are able to make the transition to regular orthography. Results in England at this time tend to favor I.T.A., but both Sir James and Mr. Downing are seeking further, more conclusive evidence in support of this new instructional medium.

Does this version of an excerpt from "Chicken Licken" make learning to read an easier task for first graders? Is it really possible that young children can master such strange-looking type in just half the time ordinarily required for T.O. (traditional orthography)?

Experimental work in British schools seems to offer a strong, affirmative answer to both questions. Why do its proponents consider Augmented Roman a boon to beginning reading? Why, where, and when did it begin?

The Augmented Roman Alphabet, now given the more descriptive title, Initial Teaching Alphabet (I.T.A.), was designed by Sir James Pitman as a more simple, more reliable alphabet for learning to read. Experimental work with I.T.A. began in London during the fall of 1960. Children in the experimental program use it until they become confident and fluent in reading books printed in I.T.A.; then they transfer to books printed in our traditional alphabet with regular English spelling.

How can I.T.A. help the beginner? I.T.A. has three advantages which we believe should help young children toward a better start in reading. These include the following:

1. Easing the initial task of learning to read
2. Reducing the ambiguity of conventional spelling
3. Making the coding of English phonemes less complex

Just how is the beginning reader's burden made lighter? I.T.A. presents fewer characters, fewer whole-word representations, and fewer phonic symbols. Although there are 43 characters in I.T.A. (fig. 1), children must master an even larger number of characters in conventionally printed books, since in I.T.A. there is only one form for each character. In T.O. there are always two or more forms for each alphabet character. In I.T.A. capitalization is achieved by printing a larger version of the same lowercase shape.

In I.T.A. the beginner must learn fewer than 50 elementary phonic facts as a foundation for word building, rather than hundreds of alternatives in conventional lowercase print alone, and more than 2,000 if conventional capitals and script characters are taken into account. For example, the sound common to the words *do*, *zoo*, *true*, and *shoe* has at least 18 different lowercase spellings, plus 12 uppercase alternatives in conventional print. In I.T.A. these 30 or more alternatives are reduced to one single printed symbol for this one single basic unit of sound (fig. 2).

How does I.T.A. reduce ambiguity in the code? In I.T.A. children are not confronted with the ambiguity resulting from the erratic, unreliable use of vowels characteristic of T.O. Consider the variant

Number	Character	Name	Example	Traditional spelling
1	æ	ae	ræt	rate
2	b	bee	big	big
3	c	kee	cat	cat
4	d	dee	dog	dog
5	ϵϵ	ee	mϵϵt	meet
6	f	ef	fill	fill
7	g	gae	gun	gun
8	h	hae	hat	hat
9	ie	ie	tie	tie
10	j	jae	jelly	jelly
11	k	kae	kit	kit
12	l	el	lamp	lamp
13	m	em	man	man
14	n	en	net	net
15	œ	oe	tœ	toe
16	p	pee	pig	pig
17	r	rae	run	run
18	s	ess	sad	sad
19	t	tee	tap	tap
20	ue	ue	due	due
21	v	vee	van	van
22	w	wae	will	will
23	y	i-ae	yell	yell
24	z	zed or zee	fizz	fizz
25	ʑ	zess	houʑeʑ	houses
26	wh	whae	when	when
27	ch	chae	chick	chick
28	th	ith	thaut	thought
29	th	thee	the	the
30	ʃh	ish	ʃhip	ship
31	ʒ	zhee	meʒuer	measure
32	ŋ	ing	siŋ	sing
33	ɑ	ah	fɑr	far
34	au	au	autum	autumn
35	a	at	appl	apple
36	e	et	egg	egg
37	i	it	dip	dip
38	o	ot	hot	hot
39	u	ut	ugly	ugly
40	ω	oot	bωk	book
41	ɷ	oo	mɷn	moon
42	ou	ow	bou	bough
43	oi	oi	toi	toy

Figure 1.—The Augmented Roman Alphabet.

Traditional orthography compared with Pitman's Initial Teaching Alphabet.

Traditional Orthography			Pitman's Initial Teaching Alphabet	
1.	u	ruby (and in RUBY)	1. ꝏ	rꝏby
2.	u..e	rule		rꝏl
3.	U..E	RULE		rꝏl
4.	o	do (and in DO)		dꝏ
5.	o..e	move		mꝏv
6.	O..E	MOVE		mꝏv
7.	ui	fruit (and in FRUIT)		frꝏt
8.	ui..e	bruise		brꝏz
9.	UI..E	BRUISE		brꝏz
10.	ou	group (and in GROUP)		grꝏp
11.	ou..e	route		rꝏt
12.	OU..E	ROUTE		rꝏt
13.	ough	through		ƫhrꝏ
14.	OUGH	THROUGH		ƫhrꝏ
15.	oo	moon (and in MOON)		mꝏn
16.	ooe	wooed		wꝏd
17.	OOE	WOOED		wꝏd
18.	oo..e	ooze		ꝏz
19.	OO..E	OOZE		ꝏz
20.	heu	rheumatism		rꝏmatism
21.	HEU	RHEUMATISM		rꝏmatism
22.	ue	flue		flꝏ
23.	UE	FLUE		flꝏ
24.	eu	maneuver		manꝏver
25.	EU	MANEUVER		manꝏver
26.	ew	grew		grꝏ
27.	EW	GREW		grꝏ
28.	oe	canoe		canꝏ
29.	OE	CANOE		canꝏ
30.	wo	two (and in TWO)		tꝏ
TOTAL 30			TOTAL 1	

Figure 2

Traditional Orthography	Pitman's Initial Teaching Alphabet
move	mꝏv
cove	cœv
gone	gon
one	wun
women	wimen

Traditional Orthography	Pitman's Initial Teaching Alphabet
cat	cat
hat	hat
chat	ʧat
which	whiʧ
thigh	ƫhie
thy	ʈhie

Traditional Orthography	Pitman's Initial Teaching Alphabet
mine	mien
bone	bœn
lane	læn
tune	tuen

Figure 3

sounds of the letter *o;* in I.T.A. this letter is used to represent only one sound (fig. 3).

How does I.T.A. make the coding of English phonemes less complex? In I.T.A. children do not have to learn that the *c* in "cat" and the *h* in "hat" represent quite a different sound at the beginning of "chat." In T.O. consonant and vowel diagraphs are always printed as two or more letters. In I.T.A., there is a separate symbol for each of these sounds (fig. 3).

Another type of ambiguity is also removed in I.T.A. In conventional English spelling, the basic left-to-right rule of reading is broken in words like *mine* and *lane*. A reversal is necessary in decoding the sounds signaled by silent *e* at the end of a word. In I.T.A. the left-to-right rule is never broken (fig. 3).

The Experimental Plan

The basis of the plan for obtaining reliable, objective data for a valid assessment of the effectiveness of the new alphabet is a comparison between some 2,000 children using I.T.A. and a matched control group using the traditional alphabet and spelling for beginning reading.

In this, the first phase, the experimental schools are varying *only the medium* in which the beginning reading books are printed. Insofar as possible, teaching methods and the language content of the books are being held constant. The entire *Janet and John* scheme,[1] the most widely used reading program in Britain, has been printed in I.T.A., plus a variety of other books for the library corner.

At the beginning of 1961, education authorities in areas representing a cross section of the school population agreed to call a meeting of head teachers to discuss the Reading Research Unit's invitation to experiment with I.T.A. Twenty-one schools were selected for the first phase, and other schools were chosen to provide control classes using the traditional alphabet.

Before the summer vacation of 1961, the teachers concerned attended special, 2-day training workshops in the use of I.T.A. at which they learned the new alphabet and the spellings used in the published I.T.A. children's books. They were encouraged to conduct their classes along their usual lines, varying their methods only as pupil achievement might necessitate. The aim was to concentrate on the experimental variation of the medium and to hold the method constant.

---

[1] In England, the word "scheme" is used instead of "series," as in the United States.

These procedures, teachers' meetings, I.T.A. workshops, and parents' meetings are being repeated for the second phase of the experiment in which over 50 additional schools have introduced I.T.A. for beginning reading.

The design of the Reading Research Unit's experiment with I.T.A. provides for two lines of control. First, each school acts as its own control; the results of objective tests of attainments in reading and other subjects in the experimental classes are compared with results from the same school's control classes of children who had their reading instruction with books not printed in I.T.A. Second, matched control schools are provided where I.T.A. is not used at all. Teachers at these schools have received refresher courses, and they meet regularly to discuss reading research in order to compensate for the Hawthorne Effect which may be generated by the training and research meetings of the I.T.A. teachers. In this and in other ways, care has been taken to provide comparable situations in I.T.A. and control classes.

Evidence of Effectiveness

Of course, at this early stage in the experiment only limited preliminary results can be reported. These come from that portion of the sample which joined the research classes when the research began in September 1961.

The 4- and 5-year-old children who joined the experimental and control classes in September 1961 have been compared on two objective tests of reading (word recognition) and on their progress through the primers of the *Janet and John* reading program. Also, at the end of May 1962, the headteachers of 19 schools in which the experimental beginners' classes were being taught to read with I.T.A. were asked to give their "considered judgment" as to what changes, if any, had been brought about by the introduction of the new medium. A guide on the points to consider in making their report was provided; and although the headings took the form of questions, it was not intended to be a questionnaire. These questions were worded neutrally; e.g., "How do the *reading standards* compare with previous years?" and "Is there any change in the proportion of real *nonstarters* at reading?" The headteachers were asked to give their opinion on the results of I.T.A. teaching up to June 1, 1962, 9 months after the beginning of the experiment.

In June 1962, both experimental and control classes were tested on Schonell's graded word reading test. The control group was given the standard version in the traditional alphabet and spelling, while the experimental group took the same test transliterated into I.T.A. Except for varying the printed medium, all conditions were held constant; e.g., size of print, test environment, and other factors. It is quite clear that the scores of the I.T.A. group are superior to those of the control group and that the distributions are significantly different (0.001 level of confidence). Forty-eight percent of the I.T.A. children had scores of 10 or more words correct, compared with only 15 percent of the control group. Thirty-one percent of the I.T.A. group had scores greater than 20, compared with only 6 percent of the control group. Scores of over 30 were achieved by 19 percent of I.T.A. learners, but by only 3 percent of controls.

These objective test data are supported by the independent opinions of the headteachers. Each of the headteachers of the experimental schools reported higher reading achievement than during previous years.

It seems reasonable to suggest, even at this early stage, that this evidence provides a strong indication that the traditional alphabet and spelling of English is indeed a serious cause of difficulty to children beginning to learn to read. Further support for this view appears to be given by the results of a comparison of the attainments of the *young* (born between March and December 1956) and the *very young* (born between January and September 1957).

The results for the control schools showed the expected difference between the age groups. The *young* children born in 1956 were superior to the *very young* born in 1957 in reading traditional print (0.001 level of confidence). However, in the I.T.A. classes this difference disappeared; in I.T.A. classes the progress of the *very young* equaled the progress of the older children.

This trend not only suggests that our traditional alphabet and spelling is an important cause of difficulty in beginning reading, but it also fails to give any support to the current notion that children with mental ages below 6½ years are "not ready" for reading. The majority of 4-year-olds may not be "ready" to learn to read *traditional orthography*, but this does not appear to be true of their ability to learn to read I.T.A.

The I.T.A. pupils appear to be making much more rapid progress in their readers than the children who are using conventionally printed books. For instance, 56 percent of the children in the I.T.A. classes have reached Book 2 or beyond, while only 21 percent of the control group have done this. Thirty-four percent of I.T.A. children have progressed to Book 3 or beyond, but the proportion is only 8 percent for the control classes. For Book 4 and above, the figures are 17 percent for I.T.A. and 3 percent for traditional orthography.

The headteachers of the experimental schools reported that I.T.A. not only accelerated progress and raised reading standards, but that it also afforded certain other advantages. They were in general agreement that I.T.A. accomplishes the following:

- **Raises the young beginner's level of self-confidence**
- **Increases enthusiasm for reading and interest in books**
- **Allows children to be more independent in their work**
- **Results in a marked improvement in creative writing**
- **Permits children's thoughts to flow more naturally in writing**

Can children transfer their reading skill from I.T.A. to the traditional alphabet and spelling?

Thus far the evidence from our research seems to show that the conventional alphabet and spelling of English are a source of considerable difficulty in beginning reading and that I.T.A. removes these difficulties. Since Pitman designed I.T.A. specifically as an initial teaching medium, however, it should be used only until the pupil is ready to transfer to conventional print. Sir James was particularly careful in producing characters and in devising rules of spelling which would make this transfer an easy process. He took care to make I.T.A. compatible with T.O. by preserving the main cues used by the readers of regular English print.

Clearly, it is too early to judge for all the children in the experiment how easy this transfer of reading skill from one system to another will be, but the indications from the spontaneous comments of the headteachers in their reports of the situation up to June 1, 1962, are that it is likely to be achieved without difficulty. Judgment on the question of transfer from I.T.A. should be withheld until all the children have reached that stage in the reading program.

Conclusions

Definite conclusions or even partial acceptance of current indications must be postponed until all the many vital questions relating to the use of I.T.A. for beginning reading have been subjected to the full range of searching tests under conditions of rigorous scientific control planned in these investigations. The first objective data from the experimental and control classes which have been reported here relate only to a first-phase subsample and only to the early stages of these children's educational careers. Nevertheless, one very significant conclusion is clearly justified from *a priori* considerations and from these early results of the experiment:

The medium used in beginners' books seems to be a vital factor in learning to read. Since most reading research has failed to control this factor, the printed medium, many generalized judgments on problems of reading instruction may need to be substantially reinvestigated and, perhaps modified.

One further tentative conclusion may be justified. It seems reasonable to suggest that the preliminary data presented in this paper, together with the *a priori* considerations, indicate that Sir James Pitman's I.T.A., with its design for transfer to traditional print later, does appear to be promising enough to warrant a more extensive demonstration and evaluation.

Bibliography

DOWNING, J. A. *The Augmented Roman Alphabet: A New Two-Stage Method To Help Children To Learn To Read.* London: University of London Institute of Education. 1961.

——— *How Your Children Are Being Taught To Read by the Augmented Roman Alphabet Method.* London: University of London Institute of Education. 1961.

——— "The Relationship Between Reading Attainment and the Inconsistency of English Spelling at the Infants' School Stage," *British Journal of Educational Psychology,* 32, 166–177. 1962.

——— *too bee or not to be:* the Augmented Roman Alphabet. New York: Pitman. 1962.

——— "Experiments With an Augmented Alphabet for Beginning Readers in British Schools," *Frontiers of Education,* A. E. Traxler, ed. Washington, D.C.: American Council on Education. 1962. p. 99–157.

——— and GARDNER, W. K. "New Experimental Evidence on the Role of the Unsystematic Spelling of English in Reading Failure," *Journal of Educational Research,* 5, 69–76. 1962.

PITMAN, I. J. "Learning To Read: An Experiment," *Journal of Royal Society of Arts,* 109, 149–180. 1961.

SCHONELL, F. *Psychology and Teaching of Reading.* Edinburgh: Oliver & Boyd. 1949.

READING IN THE KINDERGARTEN

JOSEPH E. BRZEINSKI

IN 1960, WHEN THIS STUDY BEGAN, the Denver Public Schools had about 9,000 kindergarten children divided into 300 classes. This study involved 122 classes randomly assigned by school to control and pilot groups. This assignment resulted in 61 classes in the control group and 61 classes in the pilot group. Thus, approximately 4,000 pupils were divided equally into control and pilot groups for kindergarten instruction.

Children in the kindergarten pilot groups received instruction in the beginning reading activities for 20 minutes per day. The children in the control groups followed the regular kindergarten program.

When the children in the study entered the first grade, the pilot and control groups were in turn divided into two groups. This division provided four first-grade groups:

Group I	**Regular program in kindergarten** **Regular program in the first and later grades**
Group II	**Regular program in kindergarten** **Adjusted program in the first and later grades**
Group III	**Pilot program in kindergarten** **Regular program in the first and later grades**
Group IV	**Pilot program in kindergarten** **Adjusted program in the first and later grades**

Teachers were supplied with appropriate instructions and materials for the group to which they were assigned. Children in all groups in

---

Educators seem unable to agree upon the value of an early start in reading, since research has generally failed to disclose any long-range advantage for pupils who learned to read prior to age 6. A bold step toward settling this issue has been taken in Denver, Colo., where 4,000 pupils have been involved since 1960 in an experiment designed to test the value of reading instruction in the kindergarten. The director of reading research for Denver public schools, Dr. Brzeinski, presents here an interim report.

Denver school authorities offer a guarded appraisal of their findings, but report that results thus far seem to favor the early starters. Although it would be premature to generalize at this time, students of reading will want to keep a close watch on the Denver study for more conclusive data than have previously been available concerning the usefulness of reading instruction prior to first grade.

the first grade received the same amount of reading instruction. The regular reading program is that detailed in the Denver Public Schools Reading Guide and is similar to those programs suggested in teachers' manuals of most basal readers, with much emphasis placed upon a program of extended reading involving the use of individual library books.

The adjusted program has two characteristics: (1) It was modified to continue use of the pilot technique with adopted basal readers, and (2) it provided for their use at an accelerated pace.

Group I provided a useful base against which to compare other groups. Group II permitted a comparison between groups who received the same instruction introduced at different times. Group III made possible the assessment of the effect of introducing reading in kindergarten when a regular reading program was provided in the first and following grades. Group IV followed an experimental program in kindergarten and a program in first grade adjusted to be consistent in approach with the kindergarten program and accelerated to take advantage of gains made in kindergarten.

Long-Range Study: September 1962 to June 1965

To determine the long-range effects of the study, pupils tested at the end of the first grade are to be tested again at the end of later grades for a period of 5 years. This will indicate the permanence of any gains made by the groups at the end of the initial phases of the experiment. Details of this testing schedule follow:

October 1960—Skills Basic to Beginning Reading, pretest
June 1961—Skills Basic to Beginning Reading, posttest
October 1961—Kuhlmann-Anderson
June 1962—Gates Primary Reading
June 1962—Gates Advanced Primary Reading
May 1963—Gates Reading Survey
May 1963—Rating of Pupils for Reading Disabilities
June 1963—Stanford Achievement Test
June 1963—Number of Books Read (or other appropriate measures)
May 1965—Gates Reading Survey
May 1965—Rating of Pupils for Reading Disabilities
June 1965—Stanford Achievement Test
June 1965—Number of Books Read (or other appropriate measures)

Although other appropriate measures may be substituted for those listed above, the ones named provide a general indication of types of tests to be used.

In addition to the tests administered to the pupils, a questionnaire dealing with occupation, education, and similar matters was given to the parents. This questionnaire requested information on parental help in learning to read and parental attitudes toward reading. This information was used in controlling background variables in the statistical evaluation of experimental groups.

Objectives

Six hypotheses were formulated dealing with the comparisons to be made among four treatment groups; the main variable distinguishing the groups was the time of initial instruction in reading, kindergarten versus first grade. A second variable of some importance for clarifying the interpretation of results dealt with the program of instruction in reading in the first and following grades, regular program versus program adjusted to gains made in experimental method of beginning reading instruction.

Through this study, it was hoped to find whether or to what extent children who have beginning reading activities in the kindergarten will have the following characteristics:

1. Larger reading vocabularies, better reading ability, and greater comprehension
2. Evidence of desirable habits of reading and love of reading by the quantity and quality of their reading
3. A lower incidence of reading disabilities than children who do not have these beginning activities

The reading activities consisted of seven steps:

1. Giving children practice in using something spoken to call to mind any word that could come next to make sense
2. Giving children practice in listening for consonant sounds at the beginning of words spoken to teach what is meant by the beginning of a spoken word
3. Giving children practice in distinguishing letter forms and learning letter names
4. Giving children practice in using together something spoken and the beginning sound clues to call to mind a word that is omitted
5. Teaching children the letter-sound associations for consonants
6. Giving children practice in using together something spoken and the beginning consonant letter or letters to call to mind a word that is omitted
7. Giving children practice in using together something spoken and the beginning consonant letter or letters in a printed word to decide what that word is

No workbooks were used in the kindergarten. It has been suggested that the activities used in the program were a kind of oral-visual reading readiness program. Since "readiness" is such a complex term and subject to many misunderstandings, the teaching procedure used in this study was designated either "beginning reading activities" or simply "reading."

The method was designed to capitalize upon individual differences innate in children. Teachers were encouraged to advance at a rate concomitant with the interest and ability of the children. Teachers were advised not to be concerned over differences which might occur. This meant that some pilot group children might not be able to learn the trial activities and should not be taught them. Others might learn part or all of these beginning reading activities; and some might be able to learn to read from preprimers during the last 6 weeks of kindergarten. Teachers were provided help in making this determination.

Testing the Hypotheses

Hypothesis 1

The experimental groups will show significantly greater achievement in reading at the end of the first grade than will the control groups.

A specially constructed test was used as a pretest and posttest to measure the degree to which pupils possessed basic reading skills prior to and following kindergarten instruction. The Gates Primary Reading Test and the Gates Advanced Primary Reading Test were administered to the experimental and control groups at the end of the first grade. These tests provided a score for word recognition (vocabulary), for sentence reading, and for paragraph reading (comprehension). (These are generally considered to be important aspects of reading achievement at the first-grade level.) Appropriate statistical treatment was given to these scores to determine if a statistically significant difference exists between the achievement of the control and the achievement of the experimental groups.

Hypothesis 2

The experimental groups will have significantly greater reading rate, reading vocabulary, and reading comprehension at grades 3 and 5 than will the control groups.

The Gates Reading Survey or other similar tests will be administered to the experimental and control groups at the end of grades 3 and

5. These tests will provide scores for reading speed, accuracy, vocabulary, level of reading, and total reading ability. These scores will be given appropriate treatment to determine if statistically significant differences exist.

Hypothesis 3

The experimental groups and control groups will show no significant differences in the number of pupils who evidence reading and other related disabilities at grades 3 and 5.

The difficulties involved in testing this third hypothesis are recognized; therefore, the details of the method to be employed are being worked out during the research. A panel of experts which may be composed of two consultants, a psychologist, and two master reading teachers will be employed. It will be the task of this panel to establish criteria, or standards, by which existence of reading disabilities can be recognized and judged. After suitable trial of these criteria, members of this panel may examine the subgroups for evidence of the existence of these disabilities. In order to assure objectivity of appraisal, these subgroups will not be identified as experimental or control. Pupils in these subgroups may also be tested for possible visual defects by school nurses. Objective reports will be prepared by this panel of experts.

Hypothesis 4

The experimental groups will make significantly greater gains than will the control groups in achievement in certain academic subjects at the end of grades 3 and 5.

In studies of this type, the longitudinal effects need to be considered. What will be the difference between the experimental and control groups several years later? To secure answers to this question, the appropriate battery of the Stanford (or similar) Achievement Test will be administered to the pupils of the control and experimental groups at the end of grades 3 and 5. These tests will provide scores in arithmetic, reading, science, study skills, and social studies. These scores will be analyzed to determine patterns of differences which may exist between the control and experimental groups.

Hypothesis 5

The experimental groups will evidence greater interest and enjoyment in reading at the end of grades 1, 3, and 5, as indicated by the quantity of reading and other appropriate measures, than will the control groups.

Two means may be used to gather needed data. *First*, teachers of these pupils have been asked to keep individual reading records of all independent reading done by the pupils under the direction of the school. *Second*, parents have been asked to provide objective, accurate information regarding the quantity of home reading. Other appropriate procedures may be devised during the progress of the study.

Hypothesis 6

The experimental group, receiving a program of instruction in the first and following grades adjusted to gains made in kindergarten, will be superior to the other groups on the criterion variables mentioned in the preceding paragraphs.

The test of this hypothesis, the import of which has been discussed, depends upon a comprehensive treatment of the results of the proposed study.

Method of Statistical Analysis

Throughout the study, the principal statistical technique will be analysis of variance. The primary variable considered is the time of beginning reading; other variables are mental age, chronological age, IQ, and family characteristics.

Comparisons will be made on the criterion-variable (reading achievement) between experimental groups and combinations of groups. Effects of other variables will be studied in the same way. Analysis of variance will also allow computation of the interaction between variables. For example, it will show whether one beginning reading time is superior for all mental-age groups or whether different times are better for different mental-age groups. A separate analysis of this type will be made with mental age, chronological age, IQ, family characteristics, each used as the independent variable. In every case, attention will be given to the interaction of the treatment variable (time of beginning reading) with the other variables in determining the criterion variable (reading achievement and the like).

Because the design has large numbers of experimental subjects, the statistical work has been programed for a computer.

Results

Because the present study is of a longitudinal nature, any conclusions based upon findings reported at this time must be considered tentative. Indeed, it would be well to view these conclusions as hypotheses subject to further testing, modification, or verification.

Kindergarten Findings

An analysis of the data gathered during the kindergarten year was made to determine the suitability of the trial method and materials for that age level. This analysis involved a pretest administered in October 1960 and a posttest given in May 1961. A teacher questionnaire provided additional information. The results indicated that—

1. **Kindergarten children could and did learn certain beginning reading skills.**
   - **Kindergarten-age children were able to learn letter forms, letter names, and letter sounds.**
2. **A planned program of systematic instruction in beginning reading skills appeared to be more effective than a program which incidentally provided opportunity for the development of reading readiness.**
   - **Both groups made gains. Examination of adjusted mean test scores showed the classes with the planned program gained an average of 21.8 points, while the classes with an incidental program gained an average of 12.9 points. This difference was statistically significant at the 0.001 level of confidence.**
3. **Children taught the beginning reading skills in kindergarten did not forget them during the summer school intermission.**
   - **The possibility existed that, since pupils in the pilot classes seemed to learn more than those in the control classes, they would also forget more during the summer months when they are less actively engaged in learning activities. To test this hypothesis, 49 children in the pilot group and 49 children in the control group were tested in September 1961 when these children had just entered the first grade. The children in the pilot group had an average loss of 1.45 points, while the children in the control group had an average loss of 3.47 points. The difference in these means is not statistically significant, seeming to indicate that the children in the pilot group maintained their advantage during the summer months.**

Another finding shown by an analysis of kindergarten data was that not all children progressed at the same rate. Some children made little or no progress in learning the seven steps of the trial program. Some children were able to read preprimers and primers during the last 6 weeks of kindergarten. Most children were able to recognize letters, learn their names and sounds, and, with the help of context, read words.

Analysis of the teacher questionnaires and interview data showed that growth in reading in the kindergarten can be achieved without greatly modifying existing kindergarten programs through better utilization of the time presently available.

First-Grade Findings

Tests used to gather data during the first grade were the Gates Primary Reading Test and the Gates Advanced Primary Reading Test. Analysis of adjusted test scores suggests that—

1. The children who had the beginning reading activities in kindergarten scored significantly better at the end of the first grade than did the children who had the regular kindergarten program.
2. Optimum reading achievement was obtained when adjustments were made in the first-grade program to take advantage of gains made in the kindergarten.
3. The time of introduction of the beginning reading activities had a significant effect on achievement. The children who were taught the pilot materials in kindergarten were significantly better readers than those who began the same method in the first grade.

These differences reported are significant beyond the 0.001 level of confidence.

An analysis of the secondary effects reveals that—

1. Girls in each group learned more than boys. The overall difference in adjusted mean scores was 9.44. Differences within each treatment group did not differ significantly from this.
2. A positive correlation of 0.58 was found between mental age and reading achievement.
3. Categorization by chronological age had no significant effect on achievement. The greatest difference between CA groups was 4.57. This difference had a probability greater than 0.10 and must be attributed to chance.
4. There were no significant interactions. This would tend to support the findings discussed previously.

Conclusions

Results at the end of 2 years of study appear to establish an advantage for children who had an opportunity to learn elements of beginning reading in the kindergarten. Use of context and knowledge of letter names, sounds, and forms seemed to help children progress successfully when they began to read in books.

A practical implication would be the provision of appropriate possibilities for growth in reading in the kindergarten. Growth in reading is too important to be ignored or left to chance, incidental development. Results of the present research study suggest planning must occur if kindergarten-age children are to experience continuous growth in reading, concomitant with growth in other important areas. Experience has shown that such growth need not be at the expense of growth in other areas vital to a sound, balanced program of kindergarten instruction.

THE LANGUAGE EXPERIENCE APPROACH

R. V. ALLEN

What I can think about, I can talk about.
What I can say, I can write—or someone can write for me.
What I can write, I can read.
I can read what I can write and what other people can write for me to read.

THIS IS THE LANGUAGE-EXPERIENCE APPROACH in reading as it is conceptualized by each child. It is the formula that is basic to the implementation of the program as it has been described and developed in San Diego, Calif., and elsewhere. Everything else that is said here and everything that is written about it is an elaboration of this very simple foundation.

How Did the Language-Experience Approach in Reading Develop?

As we began the development of the design for depth research, we became aware that most so-called research in reading dealt with the same basic ideas and that variables tended to be only new embroidery on the same old cloth. No one seemed to reject the basic structure of most present-day reading programs. There was really no opportunity for us to engage in significant research until programs which were significantly different had been established long enough to furnish some areas of contrast to the researcher.

The language-experience approach to reading has focused national attention on San Diego County, Calif. The man whose imagination and understanding of children were largely responsible for developing this approach describes it in this paper.

Dr. Allen explains how the language-experience approach provides for sight vocabulary development and phonics instruction, although the teaching of these skills is less highly structured than in other basic programs. He is critical of most reading research, characterizing it as "new embroidery on the same old cloth."

Until this year, Dr. Allen has been curriculum director for San Diego County schools; he recently became professor of education at the University of Arizona.

718-884 O - 64 - 5

It was during a period of rejecting well-established ideas about reading that we formulated some questions which needed new and imaginative answers. This searching for questions as well as answers led to the description of what is now called the language-experience approach in reading. The approach as we describe it was first tested along with other approaches in the Reading Study Project of San Diego County.

It became apparent to the working committees in our study that the real issue for studies in reading instruction was not one of analyzing two or more approaches to determine which one was *better* than the other, but rather to determine what each procedure might contribute to pupil development. We felt that we should include reading problems which related to the diversity of our school population and to our increased information concerning human growth and development. This meant that we studied and considered many possible ways of teaching reading—especially the beginnings of reading.

As the research team investigated various "approaches to teaching reading," it selected three for detailed study: The *basic reader* approach, the *individualized* approach, and the *language-experience* approach.

The three approaches were tested in many classrooms—not to compare one against another, but to give a team of observers an opportunity to analyze the use of each approach over a period of time. It was during this period of observation, careful reporting, and systematic analysis of data that the research team confirmed the hypothesis: *There are numerous effective ways to teach reading in our schools.*

In the years which have followed the formal study, it is the language-experience approach in reading that has continued to be of interest to educators across the Nation, and in San Diego County it has offered a major breakthrough in opening up reading instruction for inspection without the handicap of vested interests in materials and methods.

What Is the Language-Experience Approach?

Briefly stated, the language-experience approach is one which brings reading and the other communication skills together in the instructional program. In this approach there is no way, nor any need, to distinguish between the reading program and the development of listening, speaking, and writing skills. The "togetherness" of skill development makes possible the continuing use of each child's own experience background and thinking as he grows toward reading maturity.

More than other approaches which have been described at the classroom operational level, the language-experience approach uses the thinking of individual children in the development of materials which promote skill development. It is called the language-experience approach because teachers use as a major guide a listing of language experiences which were selected during our study as ones which must be developed as much as possible in order to assure effective communication in a democratic society—a society which values divergent thinking and creativity.

The language experiences which have been selected for the basic framework of the program are ones which, when implemented at the classroom level, require the selection of learning experiences which generate productive thinking, allow freedom of expression, stimulate individuality, value ingenuity, satisfy curiosity, and promote personal satisfaction to the extent that learning to read becomes a lifelong experience which requires ever-maturing and more complex skills and knowledge. These language experiences may be described as follows:

1. *Sharing experiences*—The ability to tell or illustrate something on a purely personal basis.
2. *Discussion experiences*—The ability to interact with what other people say and write.
3. *Listening to stories*—The ability to hear what others have to say and relate it to their own experiences.
4. *Telling stories*—The ability to organize one's thinking so that it can be shared orally or through dictation in a clear and interesting manner.
5. *Dictating*—The ability to choose, from all that might be said, the most important part for someone else to write and read.
6. *Developing speaking, writing, and reading relationships*—The ability to conceptualize reading as speech that has been written.
7. *Making and reading books*—The ability to organize one's ideas into a form that others can use and the ability to use the ideas which others have shared through books.
8. *Developing awareness of common vocabulary*—The ability to recognize that our language contains many common words and patterns of expression.
9. *Expanding vocabulary*—The ability to expand one's vocabulary through listening and speaking, followed by writing and reading.
10. *Writing independently*—The ability to write one's own ideas and present them in a form for others to read.
11. *Reading whole books*—The ability to read books for information, recreation, and improvement of reading skills on an individualized and personalized basis.
12. *Improving style and form*—The ability to profit from listening to and reading well-written materials.

13. *Using a variety of resources*—The ability to recognize and use many resources in expanding vocabulary, improving oral and written expression, and sharing.
14. *Reading a variety of symbols*—The ability to read symbols—the clock, calendar, radio dial, and thermometer—in their total environment.
15. *Studying words*—The ability to find the correct pronunciation and meaning of words and to spell the words in writing activities.
16. *Improving comprehension*—The ability, through oral and written activities, to gain skill in following directions, understanding words in the context of sentences and paragraphs, reproducing the thought in a passage, and reading for general significance.
17. *Outlining*—The ability to use various methods of briefly restating ideas in the order in which they were written or spoken.
18. *Summarizing*—The ability to get the main impression, outstanding ideas, or the details of what has been read or spoken.
19. *Integrating and assimilating ideas*—The ability to use reading and listening for specific purposes of a personal nature.
20. *Reading critically*—The ability to determine the validity and reliability of statements.

These language experiences become the major framework within which children learn to read. It is obvious that the ones at the top of the list require less maturity on the part of the learner and less background of experience than those at the end of the list. It should be equally obvious that this program is not conceptualized as a "reading period" during the day; rather, it might be described as the glue that holds the program together. As the program develops, it gives depth of meaning to art and construction activities; it is the vehicle for conveying meanings of social studies emphases; it encourages exploration and discovery in science and mathematics; it builds spirit and understanding into singing of songs and playing of games. It places the "creative thinking process" at the heart of the instructional program.

What Concepts Does the Teacher Hold?

The language-experience approach is dependent on the evolvement of a conceptual framework more than on the practice of certain methods or the use of certain materials. Teachers and supervisors working in the program establish a pattern of thinking which guides them in the selection of activities, experiences, materials, and evaluation. This conceptual framework helps teachers establish goals for teaching which interrelate reading instruction with instruction in the other communication skills. Some of the concepts which a teacher must hold in order to work within the spirit of the language-experience approach were identified as follows by teachers participating in the San Diego County Reading Study Project:

1. As a basis for reading, the child should gain the feeling that his own ideas are worthy of expression and his own language is a vehicle for written communication.
2. The basis of children's oral and written expression is their sensitivity to their environment both within the classroom and in the world at large.
3. Freedom in self-expression, oral and written, leads to self-confidence in all language usage which includes reading skills.
4. Children's oral expression may be stimulated and strengthened through paintings, drawings, and other graphic art or sound symbols.
5. The child's own thoughts may be used as the main basis for development of reading materials in the initial stages.
6. There is a natural flow of language development in children. This flow proceeds in the following steps:
   - *a.* The child's oral expression is stimulated and strengthened through art expression.
   - *b.* The child's written expression flows easily from his oral expression.
   - *c.* Motivation for reading follows easily from the child's seeing his own language in written form.
   - *d.* After reading his own language in written form, the child moves naturally into reading the written language of other children and adults.
7. Numerous activities, experiences, and devices are used to provide for interaction of children, such as those included above.
8. Utilization of the child's language as a basis of reading instruction results in a high degree of independence in writing and reading.

What Are Some of the Goals?

When the teacher is using the language-experience approach, there are three major goals in achieving a balanced reading program: Developing a basic sight vocabulary and competence in using a variety of word recognition skills, providing a wide variety of reading materials or integrating the various communication skills, and developing a genuine desire to read.

Developing a basic sight vocabulary and word recognition skills.— A common goal of all plans or approaches is to help each child develop a basic sight vocabulary. In most plans the selection of the vocabulary to be developed is on a basis of high frequency in our language. Material is developed which repeats each word a sufficient number of times for most children to recognize it at sight.

In the language-experience approach, the idea of the highly controlled vocabulary for beginning readers is rejected as invalid. The development of a basic sight vocabulary is deemed to be an individual matter and is governed to a great extent by the *oral expression* of the learner. From oral expression the next step is *writing*, or recording the oral language. This is done by the teacher or the child according to maturity and ability. *Recall*, or reconstruction of the written language (reading), is a third step in the sequence of developing basic sight vocabulary.

Early recognition of words of high frequency in our language is a natural result of repetition which cannot be avoided in an environment of language production. Each child gradually gains a sight vocabulary which is functional to him and which reaches far beyond the words which are selected for other reading programs. Ceilings are lifted for all children.

Among the word recognition skills which are developed in all successful reading approaches but treated differently in the language-experience approach is phonetic analysis. Phonics instruction is a necessary and natural part of the language-experience approach, but it is developed from a "say it" to "see it" sequence rather than from the "see it" to "say it" sequence of other approaches.

The direct teaching program for phonics and other word recognition skills is more closely related to the writing and spelling activities where children are dealing with the language letter by letter, syllable by syllable, and word by word. The application is necessary and immediate. The desire to create stories and do independent writing provides a powerful motivation to acquire skills necessary for selecting the correct symbols to represent the sounds of oral language. The phonics learnings take place in their natural setting and have immediate application. They are applied to the real language experiences of each child, including skills of listening, speaking, word recognition, and spelling.

Providing materials for reading.—The problem of providing appropriate reading material for each child in a given classroom has been and is a source of real concern for a teacher or administrator who knows anything of learning processes. Within a given classroom there may be the son of an English professor and one of a migrant farmworker. Both have good ideas; both have information; and both have self-motivation to share their ideas and information with others. But the information shared will probably be quite different and the quality of oral language might be poles apart. Between these two children of extreme contrast in experience and language development there is in every classroom a wide range of differences among the other children.

What materials will the teacher use to help each child conceptualize reading as a record of oral language? What material can be selected which will be of interest to the wide range of individuals? How can a teacher have enough materials which are not too difficult for some and too easy for others?

Professional books, as well as teacher's manuals, stress that the materials for successful reading instruction must meet several criteria. They must be related to oral expression, they must be interesting to children, and they must be easy for children to read.

Maybe you have tried using materials which have been developed with an extremely limited vocabulary. They are easy for some, but are ridiculous in terms of their relationship to oral expression and interests of children. This is especially true at the beginning levels where the concocted materials are devoid of any real meaning or interest. There is no story, no message from an author, absolutely no similarity to the oral language of the children who are learning to recognize the words.

The language-experience approach features children as authors with unique language abilities, with wide interests, and with individual vocabulary control built in. In the process of dictating and writing their own ideas, children learn to recognize enough words that they can read what other people have written, both within the classroom and in the world of books.

Some people might say that oral language of children is so far advanced by the time they start to learn to recognize the symbolic forms of words that anything they would dictate or write would be too difficult. But analysis of materials on the difficulty of reading selections shows little evidence of any attention to the question, "What makes a sentence easy or difficult for a child to read?" It is quite possible that for many children the choppy, unnatural sentences of present-day preprimers and primers are more difficult to read than more natural sentences might be. The experience of teachers who have emphasized authorship in their classrooms bears this out.

To the extent that children perceive themselves as authors—producers of reading materials—they are interested in interacting with the products of other authors. First, they are interested in knowing what other authors in their class have produced; later, their interests expand to encompass the whole world of authorship. Their interest in a book is not based on the fact that they can learn *how* to read it, but that the author has something to say. Reading of whole books becomes a natural desire and a natural language experience for children. They assume responsibility for selecting their own material; in fact, self-selection of materials is mandatory in the language-experience approach. Many books must be in the environment—books that have been produced by the children, books purchased and brought into the classroom, books from the public libraries, and books from home. Books must be selected with a wide range of difficulty, a wide range of interest and information, and a wide range of literary forms. The success of the language-experience approach depends on the production of a balanced program of reading materials and the use of increasingly varied reading materials.

Developing motivation for reading.—Motivation for reading is stimulated through the child's realization that his oral language expression, based upon his own experiences and thought, can be written and read, and that he can read the thoughts and ideas of others. This is quite different from approaches where children are motivated to read by being helped to see the relationship of their own experiences to the story selection to be read. It assures active participation in a developmental reading program at an earlier age—at any age that a child is interested—in dictating and observing his own language being made into reading. It has built-in success from the beginning and for every child. There is no need to ask a child to reconstruct his language (read it) until he gives evidence of a desire to do so. Success, immediate reinforcement, involvement of self, and interaction with others are forces which are ever present. The power in the program is self-generated.

How Can the Classroom Be Organized?

Classroom organization must be adapted to serve an approach which does not require regular reading periods and followup activities each day for every child. Organization, materials, and facilities must be provided for a strong emphasis on production of materials. Such a program does not require the kind of information which is supposedly collected by the use of readiness tests and achievement tests. Ability grouping within the classroom for direct reading instruction is considered to be not only unnecessary, but highly undesirable. Grouping processes are used to facilitate the work of production. They do not dominate the program to the extent that they build into children self-perceptions which are damaging to them in their language development.

To accompany the emphasis on production, there must be plenty of writing materials and a plan for their distribution. A variety of reading materials for information, recreation, and skill development is essential. The program is incomplete until there is provision of sharing, discussing, and interacting of ideas, thoughts, and concerns of children in the class with the ideas, thoughts, and concerns of good adult authors. Usually this requires that the teacher read some good literature to the children each day.

How Can Pupil Progress Be Evaluated?

A program based on the gradual maturing of language experiences of children must be evaluated on a broader base than that offered by standardized tests of reading achievement. This base rests on the following understandings:

1. Ability to express personal ideas in oral and written form is a continuing expectancy.
2. Development of a positive attitude toward reading of many types and for many purposes is a measure of growth.
3. Evidence is sought that students are gaining in self-confidence, in valuing their ability to communicate their own ideas, and in their interest in the ideas of other people.
4. Choosing reading for information, for recreation, and for the improvement of skills is considered just as significant as evidence that one has the ability to read.
5. Interpretation of content of reading is expected along with simple comprehension.
6. Clarity of ideas, quality of expression, and correctness of language are expected as well as ability to use word recognition skills for oral and silent reading of prepared materials.

The teacher has multiple clues of progress in skill development and creative thinking which are not present in reading programs where children are always working with and reworking other people's language. When there is a balance in the classroom between producing and using language, there are signs of development which do not appear when children deal daily with the task of trying to fit someone else's answers to someone else's questions.

What Is Ahead?

We are not sure of what lies ahead, but we welcome the opportunity to stand at the edge of mystery in such fascinating work--the teaching of young children.

Recent Research on Beginning Reading Instruction in the United States and Canada

LEARNING FACTORS IN BEGINNING READING

Donald D. Durrell

The problems of beginning reading instruction have been greatly overdramatized. There are many communities in all parts of the country in which reading failure is seldom encountered in the first grade. All that we need is efficient instruction which is adjusted to individual subskill needs and which conforms to the nature of the learning task. The nonreader is a child who has been inadequately served in the classroom.

Of the hundreds of nonreaders coming to our clinic during the past 30 years, most could have avoided reading difficulty. In every case there were obvious weaknesses in the subskills of reading, sufficiently serious to account for the difficulty. Nearly all responded to effective skills instruction closely adjusted to their learning needs. The only exceptions were children with uncorrected sensory and physical handicaps, and these were very rare. Psychological, psychiatric, neurological, and sociological explanations of reading failure appear to us to be unimportant and misleading. Nor do we find any need for restructuring the nature of English orthography to simplify the reading task.

The two major weaknesses of nonreaders are the inability to identify separate sounds in spoken words and the lack of familiarity with printed letters. Both of these difficulties may be identified in the first week of the first grade, and suitable instruction may be given to assure success in beginning reading.[6,9,10,18] [*] Early identification

---

[*] Numbers are keyed to the references in the Bibliography at the end of this article.

Dr. Durrell, professor of education at Boston University, has worked for many years in the field of reading, in both classroom and clinic. This paper is based upon not only his wide experience but also the studies of masters and doctoral students working under his direction.

He has concluded that auditory perception is the most important, yet most seriously neglected, subskill in beginning reading. Dr. Durrell thinks that parents and kindergarten teachers should instruct children in letter names and sounds, also teaching them to write each letter.

He believes that efficient teaching, tailored to the instructional needs of children, would eliminate nearly all reading failures.

and correction of weaknesses in word perception, combined with a balanced and differentiated program of beginning reading, will eliminate reading failures and produce achievement far above the present national norms.

Essential Perceptual Abilities in Beginning Reading

In my opinion, the major subskill in which nonreaders are weak is ability to detect the auditory patterns of spoken words. Most beginning reading difficulties are essentially *auditory* failures, rather than visual failures. The fact that a child has clear speech and a wide speaking vocabulary does not assure the ability to notice the separate sounds in words.[2,15] The fact that a child can carry a tune, singing all the notes perfectly, does not indicate that he recognizes *f*-sharp, *g*, *a*, or *b*-flat. The child learns to speak by imitation of syllables; he is not aware of the separate sounds in words.

The simplest test to illustrate this point is to provide the nonreader, who has been taught letter names and sounds, with four letters on cards—say *f*, *g*, *m*, and *b*. He will be able to hold up the letters you name, and he will also hold up the right letters for the sounds given. But he will not know what to hold up when you ask him for the first letter in *magic* or *machine*, *fountain* or *fast*, *butter* or *bacon*. If perchance he has mastered the initial sounds of words, ask for the last letter in *half*, *steam*, *knob*, or *flag*. The same weakness may be discovered in later grades by asking the child to write the first and last letter, or the first two and the last two letters, in words pronounced for him. This difficulty may be overcome readily by suitable ear training, including a speech-kinesthetic approach.[12]

The auditory factor is not only the most important, but also the most seriously neglected subskill in beginning reading. The primary symbolic language is speech, and from this we transfer to print. If there are defects in the perception of the separate elements in the spoken word, there is little possibility of developing either good reading or good spelling, regardless of the method chosen. A good ear for sounds is particularly important in learning to read a language with variable spellings of the same sound.[2,20] If a child's ear is good, it does not distress him to discover that the "air" sound is spelled differently in *chair*, *care*, *bear*, *where*, or *their;* they are all ways of spelling the same sound. Such a child is no more troubled with the fact that the *s-s* sound is sometimes spelled *c* than with the fact that capital and lowercase forms of many letters are different.

It is important to note that effective phonics moves *forward* from sound to print, not *backward* from print to sound. A speech-based phonics program begins with listening for sounds in words, then moves to the ways the words are spelled in print. This acquaints the child at once with the fact that the sounds are spelled differently in the most common words in beginning reading. An early acquaintance with the variable spelling of sounds, by moving from spoken words to printed words, provides the child with the basis for inductive learning of phonics. It appears to eliminate confusions rather than to induce them.[21]

The backward approach—from print to sound—is filled with confusions and inconsistencies. If a child is taught that *s* says *s-s*, he is confused by *has*, *sure*, *easy*, *sugar*, and all of the plurals in which *s* says *z-z*. Vowel variations become utterly confusing in a print-to-sound approach, and require a maze of rules and exceptions which lead to confusion.

Emphasis on meaning and imagery related to words is highly important in the sound-to-print approach, as it is in all phonics approaches. The examination of either the auditory or visual anatomy of a word tends to diminish its meaning, with the result that the child is working with sound gulps or letter collections rather than with meaningful words. The addition of imagery and meaning makes the learning of words much easier.[4,14] We have found that increasing the imagery surrounding words is the surest way of improving spelling, as well as assuring its transfer to writing.[18] Good spellers in intermediate grades are those who have developed a "variable phonics" ability; they are more skilled at identifying homophones.[8] This ability has been developed inductively through noticing the several ways that sounds are spelled.

Obviously, reading is visual as well as auditory, and requires the ability to differentiate letters and to notice their order in words. The adult who tries to read Greek or Sanskrit without knowing the different letters can appreciate the task of the child unfamiliar with letters. If a child can tell the names of letters or identify letters named, his chances of reading are enhanced. If he can both name and write letters, his chances are good indeed. September tests of letters named correlate higher with June first-grade reading achievement than do tests of mental age.[11,16,19,20]

Probably one of the most valuable abilities that the home or kindergarten can contribute to success in beginning reading is the ability to name and to write letters. It is difficult to understand the reluctance in some quarters to teach letter names. Not only are words more clearly perceived when letters are familiar, but letter names also provide a clue to phonics since each letter name—except *h* and *w*—contains one of its sounds. Furthermore, letter names are permanent and are highly useful in many activities.

An efficient beginning reading program is characterized as much by what it omits as by what it includes. We consider most of the activities in reading readiness books inefficient or relatively useless. Even though they may have values in themselves, the following reading readiness exercises have little relation to success in beginning reading: language development through pictures; visual discrimination of pictures and nonword forms; identification of nonword sounds; various motor abilities.[1,21] We avoid the teaching of word sounds by relating them to pictured objects; it seems more efficient to relate them to printed words high in imagery. This not only relates the sound element directly to the letter in a whole word, but it also enables the rapid learner to acquire a sight vocabulary while the slower learner is identifying the word sound. This provision for differential learning is particularly important when phonics lessons are presented to groups of pupils of differing ability.

Differentiation of Instruction in Classrooms

When one moves from individual tutoring to group instruction in the classroom, the problem of differentiating instruction becomes paramount. In individual tutoring, teaching is always fitted to the exact level of achievement and the density of practice, to need for mastery; each item in subskills development is observed and immediate adjustments are made; every explanation and practice is pertinent to individual need, and it is *always* the child's turn. These conditions of learning are difficult to meet in the classroom with groups of 25 to 30 or more children. While the author of a basal reader may develop an orderly sequence of practices, this admirable sequence seldom fits any child accurately. It requires much intelligent supplementing and mangement if it is to fit different subskill needs, levels of achievement, and progress rates. Its reading readiness program often is unnecesary for superior pupils and grossly inadequate for slower ones. If is essentially a mass-instructional tool, with "suggestions" for providing for individual differences.

The superior first-grade reading program is characterized by skilled differentiation of instruction. Differences in letter knowledge and in auditory perception of separate sounds in words are discovered the first week of school. Rate of learning words is also measured. Children high in learning rate are always found to be higher in letter knowledge and ear-for-sounds; for these children, reading instruction begins at once. Children lacking letter knowledge and an ear-for-sounds are started immediately in the sound-to-print approach to reading. The most frequent sounds are taught first and density of practice is adjusted to mastery.

Every-pupil-response techniques are used to avoid taking turns and to permit easy observation of individual difficulties. For example, each child holds up the letter with which the following words begin: *candy*, *meat*, *milk*, *cake*, *corn*, *melon*, *marmalade*, *cabbage*, *cookies*—all things to eat.

In applied phonics, which follows as soon as each sound is clearly identified, children are shown words which end in the same phonogram but differ in initial sound; for example, *band*, *hand*, *sand*. Each word has a number below it. The children are told that all of these words end in "and" like *land* and *stand*. Context clues are provided by questions, such as the following: "Which of these makes music? Which would you find at the beach? Which would you put a mitten on?" The children respond showing the number of the word, and the response is verified by the teacher. No child waits for another; there are no hands waving, no walks to the blackboard or card tray. Every-pupil responses are used for review of sight vocabulary, again with response to meaning, usually indicated by *yes-no* cards. For example, when the word *mouse* is presented for review, the request is "Would you like this for lunch?" rather than "What is this word?"

This same concern for intensity of practice, permitting each child to be an active learner at all times, calls for much work by pupils in pairs or teams of three.[4, 7] Oral reading is done in pairs, avoiding a long wait for one's turn. Workbook exercises are also done in pairs, providing for mutual aid in learning. A superior reader who is a "word consultant" may be stationed near groups of slower pupils. Every effort is made to design lessons which increase the amount of reading by each pupil. Various forms of individualized reading are used for the superior pupils, although we find that pupils enjoy partners in independent reading so that they can work together on reporting tasks.

Although such intensive instruction may sound like "pressure," it is actually the reverse. All children prefer to be active than to wait; and successful learning is the most exhilarating and satisfying activity in which a child can engage. But the key is *successful learning*, and this depends upon close adjustment to level, to progress rates, and to subskill weaknesses. Meaning must be kept high, for the content of reading is more important than the symbols. The children should use "discovery" techniques, and there should be a variety of reading activities.

Bibliography

1. Allen, Ruth J., and others. *The Relationship of Readiness Factors to First Grade Reading Achievement.* Group Ed. M. thesis, Boston University, 1959.
2. Barry, Florence M., and others. *Analysis of Auditory Functions in Grades One, Two, and Three.* Group Ed. M. thesis, Boston University, 1951.
3. Berry, Edna J., and others. *Teaching Homophones in Grades One, Two, and Three.* Group Ed. M. thesis, Boston University, 1960.
4. Bradley, Mary A. *Exercises for Providing Meaningful Practice in Sound Grade Reading.* Ed. D. thesis, Boston University, 1957.
5. ———and others. *The Rate of Learning of Colorful and Abstract Words in Grade Two.* Group Ed. M. Thesis, Boston University, 1951.
6. Bresnahan, M. Marie. *Recordings for Teaching Auditory Discrimination of Word Elements.* Ed. D. thesis, Boston University, 1952.
7. Clapper, Harriet, and others. *The Effectiveness of Paired Learning on a Reading Program in Grade Two.* Group Ed. M. thesis, Boston University, 1958.
8. Comerford, Joseph. *Perceptual Abilities in Spelling.* Ed. D. thesis, Boston University, 1954.
9. Crossley, B. Alice. *Auditory and Visual Discrimination of Word Elements Through Lantern Slides.* Ed. D. thesis, Boston University, 1948.
10. Durrell, Donald D., and Murphy, Helen A. "The Auditory Discrimination Factor in Reading Readiness and Reading Disability." *Education* 73: 556–560, May 1953.
11. Gavel, Sylvia R. "June Reading Achievements of First-Grade Children." *Journal of Education* 140: 37–44, February 1958.
12. Gogolewski, Jean I. *Auditory Perception of Word Elements in Beginning Reading Through Visual and Kinesthetic Speech Clues.* Ed. D. thesis, Boston University, 1955.
13. Harrington, Sister Mary J. *The Relationship of Certain Word Analysis Abilities to the Reading Achievement of Second Grade Children.* Ed. D. thesis, Boston University, 1953.
14. Joyal, Sister Adelar-Marie. *Projected Illustrations for the Development of Word Recognition in Third Grade Reading.* Ed. D. thesis, Boston University, 1954.
15. Kavanagh, Theresa, and Hurvitz, Hazel. *Evaluation of Measures of Identification of Sound Elements of Words in Kindergarten.* Ed. M. thesis, Boston University, 1953.
16. Linehan, Eleanor B. "Early Instruction in Letter Names and Sounds Related to Success in Beginning Reading." *Journal of Education* 140: 44–49, February 1958.
17. McSweeney, Miriam J. *Word Usage Techniques in Spelling.* Ed. D. thesis, Boston University, 1959.
18. Murphy, Helen A. *Specific Training in Auditory and Visual Discrimination in Beginning Reading.* Ed. D. thesis, Boston University, 1943.

19. Nicholson, Alice K. "Background Abilities Related to Reading Success in First Grade." *Journal of Education* 140: 7–25, February 1958.
20. Olson, Arthur V. "Growth in Word Perception Abilities Related to Success in Beginning Reading." *Journal of Education* 140: 25–37, February 1958.
21. Santeusanio, Nancy. *A Planned Program for Teaching Homophones in First Grade Reading.* Ed. D. thesis, Boston University, 1962.
22. Saunders, Alta M. *The Relationship of Certain Readiness Factors to Achievement in Beginning Reading.* Ed. D. thesis, Boston University, 1959.

CHILDREN WHO READ BEFORE FIRST GRADE

DOLORES DURKIN

THIS IS A REPORT OF FINDINGS from the first of two longitudinal studies concerned with early reading ability. This study has attempted to answer the following questions during the 4 years our findings have accumulated:

1. **How many children first learn to read at home and enter the first grade with some achievement in reading?**
2. **How advanced in reading are they when they enter the first grade?**
3. **What kinds of children are these early readers?**
4. **What factors prompted their preschool reading?**
5. **What is the future value of their head start in reading?**

How Many Children First Learn To Read at Home?

The attempt to answer this question took the form of a testing procedure that involved 5,103 of the 5,236 children in a California com-

---

Dr. Durkin, associate professor of education at Teachers College, Columbia University, presents a longitudinal study of children who learned to read before entering school. Her study is of importance primarily for the insightful information it provides concerning the personality characteristics and home background of early readers, since it leaves unanswered the question: Of what future value is an early start in reading?

It is unfortunate that Dr. Durkin found it necessary to use as her control group the 201 nonearly readers who had been Binet-tested at school. Specific selection factors must have operated in their choice by school personnel for individual testing. Even a smaller group randomly chosen from the 5,103 children included in the study would have been much more meaningful for purposes of comparison. Furthermore, IQ scores (even a limited number) extending 20 points below and 30 points above the extremes reported for the experimental pupils might exert a significant effect upon standard deviations and correlation coefficients and could account for the disparities disclosed in table 3.

Finally, an underlying assumption in a discussion of the personal characteristics and home backgrounds of the early readers would be that these factors are different for other children. Such an assumption needs to be demonstrated by a presentation of similar data concerning the control pupils.

munity who were entering the first grade in September 1958. The 133 children not tested were divided between those who had been given some school help with reading during the latter part of their kindergarten year, thus becoming ineligible for this study, and those who were continuously absent during the 7-day testing period.

The initial test used to identify the subjects consisted of a list of 37 words, selected because they were common to preprimers of the 3 basal reader series used most frequently in California at that time. The rationale for selecting these words included the assumption that basal reader vocabularies would be available to preschool children if older brothers and sisters were attending elementary school. It was also assumed that parents who wanted to teach their preschool children to read would be most likely to use school-like materials—that is, basal readers.

Children were asked to read, individually and orally, as many of the words in the list as possible. Ability to identify at least 18 words became the basis for selection. Twenty-nine girls and 20 boys from 27 different schools met this criterion. After 4 years the entire 49 children remain in the study, although 17 have transferred to other schools at least once; in 9 cases, to other cities.

How Advanced in Reading Are These Children When They Enter the First Grade?

Once the 49 early readers had been identified, they were given the Gates Primary Word Recognition Test and the Gates Primary Paragraph Reading Test. Both tests were administered within the first 2 weeks of the first grade. Because the purpose of this testing was to establish the upper limits of the subjects' reading ability prior to school instruction, other tests were also used under certain circumstances. For example, if a child missed two questions or fewer on the Gates Primary Paragraph Reading Test, he was given the Gates Advanced Word Recognition and Paragraph Reading Tests. If he missed no more than two questions on the Advanced Paragraph Reading Test, he was given the Gates Reading Survey.

The same testing procedure was followed in February and in May of the first year of the study, and in September, February, and May of the second year. During the third year, reading tests were given in February and in May; during the fourth year, only in May. Yearly results of all of this testing are summarized in table 1.

Table 1.—Reading progress of 49 early readers over a 4-year period: September 1958 to May 1962

Date of testing	Reading-grade level	
	Range	Median
September 1958	1. 5–4. 5	1. 9
May 1959 (end of grade 1)	2. 3–5. 6	3. 7
May 1960 (end of grade 2)	3. 3–8. 9	4. 9
May 1961 (end of grade 3)	4. 4–10. 6	5. 3
May 1962 (end of grade 4)	4. 8–11. 2	6. 7

What Kinds of Children Are These Early Readers?

To arrive at an answer to this question, we gave the Revised Stanford-Binet Scale to the 49 subjects. Results showed intelligence quotients that ranged from 91 to 161. The median IQ for the group was 121. When the children entered the first grade, the coefficient of correlation between their intelligence as measured by the Stanford-Binet and their achievement in reading as measured in the standardized reading tests was +0.40. By the end of the fourth grade, this correlation coefficient had increased to +0.66.

What about the families of these 49 early readers? In particular, how did the children learn to read at home? Socioeconomic data gathered in parent interviews, then analyzed through Warner's I.S.C. Scale,[1] showed that 7 of the families were of professional or upper-middle-class status; 15 were of the lower-middle class; 26 were upper-lower class, and 1 was lower-lower class.

Because success in reading has so often been associated with membership in the higher socioeconomic classes, it was surprising to find that more than half of the early readers in this study came from blue-collar families. Other interview findings, however, suggested a possible reason. Interviews with parents in the lower socioeconomic classes consistently revealed a ready and even an enthusiastic acceptance of preschool reading ability. They seemed to view it as the beginning of better things to come. In contrast, parents in the higher socioeconomic classes showed concern and, seemingly, even guilt feelings about their children's ability to read before entering school. Without exception, they asked about the possibility that help at home might interfere with instruction at school. This difference in attitude might partially account for the social-class distribution of the subjects in this study.

Through the interviews it was learned that each of the 49 families had from 1 to 8 children, the average number being 3. Forty of the subjects had at least one older brother or sister. Help from these older siblings seemed to contribute to early reading ability. Sixteen of the children stated in interviews that an older brother or sister had taught them to read; however, interviews with parents disclosed that in only four instances had reading instruction been given solely by another child in the family. Both parents and siblings were involved in 24 cases.

---

[1] W. L. Warner, M. Meeker, and K. Eels. *Social Class in America.* Chicago: Science Research Associates, 1949.

Even so, having a sibling—especially a sister who is about 2 years older and who likes to play school—appears to have something to do with early reading ability. A keen desire to keep up with the older child may also have some bearing; for when one enters school, the other also wants to learn to read and write. Such an eagerness to do what others can do was commonly mentioned by parents as being characteristic of their preschool readers.

As a group, the 49 subjects were most frequently described by parents as being—and these characteristics are listed in the order of the frequency with which they were named—persistent, perfectionistic, eager to keep up with older siblings, high strung, and curious.

Other Factors That Led to Early Ability in Reading

Although parents sometimes said of their preschool child: "He learned to read all by himself," the data concerning these 49 early readers indicate that none of them learned without some kind of help. Usually this help took the form of answering persistent questions about words the children saw in books and newspapers, on signs and labels, and on TV programs. The parents of 11 early readers, however, deliberately taught their children to read.

Various factors prompted these 11 parents. Five mothers in the group said their children were so persistently interested in learning to read that they decided to teach them. One father in a bilingual family explained that his oldest daughter had experienced difficulty in learning to read and had repeated first grade. Consequently, when each of his other three children reached the age of 5, he began giving them help in reading in order to avoid future problems in school.

One mother—and she was the only mother in the study who was a teacher—said she felt her daughter was ready to learn to read when she was about 5 and began helping her at home. The other 4 mothers in this group of 11 parents said they taught their children to read early because they felt it was their responsibility, as parents, to get them ready to do well in the first grade. For them, this meant giving the child a headstart in reading.

Group progress in reading for the children of these 11 parents can be seen in table 2 under the heading of "Intent." The table also summarizes group progress in reading as it relates to other factors in the preschool instruction.

Table 2.—Reading progress as related to various factors in preschool instruction: September 1958 to May 1962

Factor	*Number of children*	*IQ median*	*Reading grade level median*	
			1958	*1962*
Age started:				
3 years	13	128.0	2.6	7.4
4 years	22	111.5	1.8	6.0
5 years	14	127.0	1.7	6.9
Frequency:				
Very often	21	119.0	2.5	6.1
Rather often	21	112.3	1.8	6.7
Intermittent	7	132.0	1.6	7.6
Intent:				
Deliberate	11	114.3	2.4	5.3
Not deliberate	38	123.5	1.9	6.9
Instructor:				
Parent only	21	112.0	2.6	7.0
Sibling only	4	123.5	2.4	7.6
Combination	24	124.5	1.7	6.7

What Is the Future Value of an Early Start in Reading?

Certainly one of the major questions in the study is that of the future value of early achievement in reading—and, in this research, "value" is defined only in terms of reading achievement. The question was given particular attention when the subjects were in grade 3. It will again be considered when the children are completing grade 6.

Originally, the plan for the end of grade 3 had been to compare the reading achievement of the 49 early readers with the achievement of children who had entered the first grade with them, who had had the same teachers as they for the first 3 grades, and who were of comparable mental ability, but who were not able to read when they started to school. It seemed that all of these criteria could be met if data from a group intelligence test, administered by the school system, were used for both groups of children. Unfortunately, even a cursory look at these IQ scores showed they were anything but realistic. There was no apparent relationship, for example, between group IQ's and achievement in reading. For the nonearly readers, these IQ's hovered narrowly around 100. For the early readers they consistently underestimated the intelligence of the brighter children, at least in relation to their Stanford-Binet scores. These considerations prompted us to include in the control group only those children who had been given a Stanford-Binet by a school psychometrist. This change necessitated other changes in research plans and, in a sense, compromises. These can be indirectly noted in a description of what finally constituted the experimental and control groups.

The experimental group included 25 of the 49 early readers. The remaining 24 had either transferred to other schools or had been double promoted during the 3-year period. Although the experimental group was reduced to 25, the Binet IQ's still ranged from 91 to 161, the medium IQ being 114.8. Reading scores from school-administered tests showed grade levels ranging from 4.4 to 6.0, with a median grade level of 5.0.

The control group was made up of 201 children who had entered first grade with the 25 early readers, but who could not read when they started to school. They had remained in the same schools as these early readers for grades 1, 2, and 3. They had also been given the Revised Stanford-Binet Scale. For this control group, IQ's ranged from 70 to 191, with a median IQ of 110.2. Their achievement scores in reading—these also came from the school-administered tests—varied from grade levels 2.0 to 6.0, with a median grade level of 4.3.

A scatter diagram showing reading scores and IQ's for both the experimental and the control groups quickly revealed the inadequacy of the school-administered reading tests to establish upper limits of achievement for the brighter children. Consequently, a twofold kind of comparison was made between the achievement of the early readers with that of the nonearly readers. The first comparison focused on all of the children with IQ's of 120 or less; the second comparison considered the children in both groups whose IQ's were 120 or higher.

Procedure for Comparison

Because of the relationship between IQ and reading achievement, the correlation coefficient for these 2 variables was calculated for the 129 nonearly readers who had Binet IQ's of 120 or less. It was found to be +0.61. The line of regression based on the relationship was plotted; the predicted reading scores for the early readers, based on this relationship, were then calculated. These calculations showed that each of the early readers with an IQ of 120 or less was doing better in reading than would be predicted for him on the basis of the relationship between IQ and reading achievement scores. Exactly how much better these early readers were doing is summarized in table 3. Another way of summarizing the data would be to say that the lower the IQ of the early reader, the greater is the advantage of an early start in reading.

Table 3.—Deviation of achievement of early readers from expected achievement on the basis of IQ scores: May 1962

IQ range	*Number of children*	*Average deviation in years*
91 to 100	5	+0. 92
101 to 110	6	+. 68
111 to 120	4	+. 35
121 to 130	3	+. 30
131 to 140	4	−. 33
141 to 161	3	+. 43

What about the reading achievement, after 3 years, of the early and the nonearly readers whose IQ's were 120 or higher? The school-administered reading tests were not sufficiently difficult to establish the upper limits of accomplishment of these brighter children. In fact, when the correlation coefficient for reading achievement and IQ was calculated for the nonearly readers, it was found to be only +0.17.

With this kind of test inadequacy, and with the low correlation coefficient, it is not very meaningful to ask: What would be the predicted scores of the early readers with IQ's of 120 or higher, as these would derive from the relationship between reading achievement and intelligence? Nonetheless the question was asked, and the "answer" is also given in table 3.

Because of the inadequacy of the school-administered reading tests, the intent now is to use, at the end of grade 6, the same testing procedure for the group of nonearly readers as has been followed during the past 4 years for the early readers. With more suitable tests we should obtain more meaningful data regarding the very important question: What *is* the later value of an early start in reading?

THE LANGUAGE OF ELEMENTARY SCHOOL CHILDREN

Ruth G. Strickland

Children enter school able to use language and to respond to it. The symbols the children have learned are oral symbols and the patterns which constitute the flow of their speech are oral patterns. Children use the same rising and falling intonation, stops and partial stops, and arrangements of word order as do the adults around them. Some children have been fortunate enough to learn standard English patterns and some have not, but all bring to school the language of their environments.

Reading is the first of the R's that childern are expected to learn in the school because it serves as a tool for much of subsequent learning. Since, psychologically, learning should proceed from the known to the unknown, a basic hypothesis of our study was that the more we know about the language children bring to school with them, the more intelligently we can build upon it. In the teaching of language skills, schools and publishers have continued to rely primarily upon studies which were conducted, for the most part, before the days of television and before the expanded experiences, real and vicarious, available to today's children.

The Research Design

This study was designed to analyze the structure of children's language in the first through the sixth grade, to compare it with the structure of the language in the books which children are taught to

---

Dr. Strickland, professor of education at Indiana University, is best known for her work in the area of elementary language arts. She has been involved in intensive research into the language of elementary school children for a number of years.

This paper presents her most recent findings and conclusions, which point to the fact that children master the basic structure of their language early in life.

Dr. Strickland also has found that children's oral language is far more advanced than the language of their reading books. Such knowledge may point the way toward more suitable basal readers of the future.

read, and to ascertain, at a selected grade level, the influence of any apparent differences on the quality of children's reading skill.

We sought to answer the following questions:

1. What patterns of structure appear in the oral language used by children in the six grades of the elementary school?
2. What patterns of subordination and elaboration can be isolated and described through linguistic analysis?
3. To what extent are these patterns of structure found in the language of children in each grade related to the age, sex, and intelligence of the children and to the socioeconomic background and education of the parents?
4. Are the patterns which children use at each grade level found in the reading textbooks designed for these grades?
5. What relationships appear at the sixth-grade level between the structure of children's oral language and their silent reading comprehension, oral reading interpretation, and listening comprehension?

The material which one reads is composed of words set forth in certain structured arrangements. The arrangements are fully as much carriers of meaning as are the words themselves. Linguistic scholars hold that a first step in the study of language is an objective description of its structure, that the words and rules which make up a language actually exist only in the act of connected speech.

It appears that little is known regarding the linguistic structure of the sentence used by children of differing ages. A major hypothesis of this investigation is that a study of children's speech, its structure and its patterns of arrangement and flow, may offer suggestions for the construction of better reading textbooks for beginners and possibly for older children as well.

This was a loosely structured descriptive study of children's language. Its major purpose was to discover, isolate, and describe the patterns of syntax found in the oral language of elementary school children and to ascertain whether they appeared in certain representative reading textbooks designed for these grade levels. Though there were minor differences in the treatment of variables at certain grade levels and of additional variables treated at the sixth-grade level, the procedure for the study included the following phases:

1. Recording the spoken language of children in the first through the sixth grades in its spontaneous form in free interaction with other children and with adults.
2. Analyzing this spoken language for the following points:
   - *a.* Syntactic structure of sentences
   - *b.* Frequency of occurrence of certain patterns of syntax
   - *c.* Amount and kinds of subordination

   d. Length of sentences
   e. Flow of language
3. Finding the relationships of these points to the age, sex, and intelligence level of the children and to the socioeconomic and educational level of their parents.
4. Searching the textbooks of certain representative series of readers to ascertain the point at which patterns that were used freely by children began to appear in the readers.
5. Analyzing selected samples from the readers at each grade level for the occurrence of patterns commonly used by children.

To the variables of age, sex, intelligence, and socioeconomic status, the variable of parental education was added at most grade levels. Also at the sixth-grade level, the quality of children's spoken language was compared with that of their silent reading comprehension, their oral reading interpretation, and their listening comprehension.

The 575 children in the study were selected by random sampling from among the 3,801 children enrolled in the 16 public schools of the Metropolitan School District of Bloomington, Ind. The schools ranged in size from two-room rural schools to fairly large city schools and covered the ethnic and socioeconomic range of the community. The sample included 100 children in each of the 6 grades except for the fourth grade, in which complete records were obtainable for only 75 children. The only control imposed on the sample was the exclusion of children who were regularly enrolled in classes for the mentally retarded.

Verbal, nonverbal, total intelligence ratings, and mental age were obtained through use of the California Short-Form Test of Mental Maturity. Paternal occupations were categorized according to the classifications of the Minnesota Scale for Paternal Occupations. Parents' education was categorized according to a six-level scale ranging from attendance at but not completion of elementary school to 18 or more years of education.

The oral language which was analyzed in this study was obtained in situations as informal and unstructured as circumstances permitted. It was recorded by a magnetic tape recorder with a unidirectional high-impedance microphone with which clear records were obtained of even the most delicate, high frequency child-voices. The recordings were made in school settings familiar to the children, and sufficient talk was recorded to provide a usable sample for each child. Recording time of 15 to 30 minutes was adequate in most instances.

Children were brought from the classroom to the recording room in groups of two or three. They were seated about a table which displayed the microphone surrounded by several figurines of familiar storybook characters suitable for the ages of the children and ranging from Mistress Mary and Red Riding Hood to Alice in Wonderland, Tom Sawyer, and Paul Bunyan. The children were stimulated to talk about themselves, their families, pets, or whatever was of interest at the moment. As talk progressed, the interviewer asked questions or made comments only when necessary to keep the conversation flowing; the storybook figures sometimes served as stimuli. The recording continued until each child was talking easily and naturally.

Although the conversations recorded on the tapes were transferred to disks for permanent storage, it proved more satisfactory to work from the tapes in making and verifying the transcriptions. Final responsibility for the accuracy of the transcriptions rested with the investigator who conducted the interviews. The investigator listened to the tapes as many times as necessary to assure proper division of the speech into phonological units. This was accomplished through careful attention to juncture, intonation, and meaning. In this study the term *sentence* will mean a *phonological unit.*

Samples of material were taken from each reading textbook at each of the six grade levels for four widely used series of reading texts. In the case of preprimers, the text of the entire book was studied. Each new pattern which appeared in the sample selected from a book was subjected to analysis in the same manner as the oral language samples. Also, each of the books was searched to ascertain the general location at which patterns commonly used by children began to appear in the text.

Analysis of Language

The 14,375 sentences comprising the language sample selected for the 575 children in the study and certain sentences found in the 4 sets of readers were analyzed according to a linguistic scheme devised for this study. The formula was devised by Mansour Ekhtiar, a member of the project staff, and was later refined and validated by five specialists in linguistics who were invited in October 1959 to a special conference for this purpose held at Indiana University and made possible by a grant from the U.S. Office of Education.

Both adults and children occasionally use sounds in their speech which are not pertinent to the structure or meaning of what they are uttering. In this study, any part of a sentence which was not syntactically or meaningfully pertinent was called a *maze.* The mazes which the children used were given special study at the levels of grades 1, 3, and 5. These mazes were subdivided into four groups identified as (1) noises, (2) holders, (3) repeats, and (4) edits. Noises were unintelligible sounds such as *ah*, *er*, and the like. *Holders*, such as *well*, *you see*, and *now uh*, were used to hold attention. *Repeats* were repetition of words such as *you—you*, *I think—I think*. *Edits* were words used by the speaker which indicated a correction or change of direction in what he was saying. Fewer noise and repeat mazes were used in grade 5 than in earlier grades, and these older children did more holding of attention perhaps in order to come to terms with what they wanted to say.

Results

In studying the total speech sample the staff found that the length of the sentences used by children varied more within a grade than from grade to grade. In several early studies of children's language, length of sentence was found to be a measure of maturity in the use of language. When children's talk was divided into units by intonation as in this study, it was found that length of sentence could not be so considered. The falling intonation followed by a pause was used to indicate the point at which the child himself terminated an utterance.

Some Generalizations Regarding Children's Language

A major contribution of the study was the method of analysis which utilized a linguistic scheme devised for this study. The method of analysis was used to isolate and quantify the language patterns used by the children in the population sample. The possibilities of the scheme far exceed the use made of it in this study. It could be used to study in greater detail the elements children use in their sentence patterns and the way they use them. It could form the basis for a study of the organization within sentences, the ways in which parts are knit together, the degree of coherence through subordination, and the extent of rambling. The relation of the range of vocabulary to verbosity could be studied with this scheme as a basis. A study could be made of deviations from conventional usage and syntax. Semantic studies and studies of elements of style might grow out of use of this scheme of analysis.

The data obtained from the analysis of children's language appear to warrant the following generalizations.

1. Children at all grade levels used a wide range of language patterns.
2. Certain patterns which children used with great frequency appear to be basic building blocks of their language.

3. These basic patterns were combined in phonological units with other patterns in a wide variety of ways.
4. Children at all grade levels could expand and elaborate their sentences through the use of movables and elements of subordination.
5. The fillers employed by children in filling the various slots and movables varied considerably in shape, though there were few outstanding differences in the fillers used by children of different ages.
6. The use of the chi-square technique revealed significant differences between the use of movables and patterns of subordination and certain variables of intelligence, mental age, occupational status, and parental education.

Further research is needed at a number of points. Except in case studies of selected individuals, little study was made of the many patterns that were used infrequently to learn to what extent they represented unique and creative ways of using language which were at the same time clear, meaningful, and within the category of standard points at which children need help with usage and with understanding of sentence structure. Certainly the number of long, run-on sentences used by many children was evidence of need for help, both with cutting long units into shorter units on the basis of meaning and with transmuting some coordinately arranged units into subordinate ones to clarify meaning and perspective.

Comparison of Children's Language With That of Reading Textbooks

In seeking an answer to the fourth question in this study, concerning whether the language patterns which children use at these grade levels are found in the reading textbooks designed for these grades, the staff used four popular reader series. These books were searched to discover which of the language patterns used most frequently by children appeared in a selected sample of reader pages. The sample of each reader series included the whole of all preprimers and eight pages selected from the beginning, middle, and end of the other basic readers in the series from primers through sixth-grade readers. While this study did not produce conclusive evidence of the presence or lack of certain patterns in any given book beyond the preprimer level, the total sample was large enought to justify the following generalizations:

1. The basic subject-verb-object pattern was the only pattern to appear in the samples of practically all of the books.
2. The patterns which appeared in the sample differed from book to book within a series as well as from series to series.

3. Patterns of sentence structure appeared to be introduced at random in a rather haphazard manner.
4. A pattern of structure, once introduced, seemed not to be followed by any sort of repetition or effort at mastery.
5. There appeared to be no scheme for the development of control over sentence structure which paralleled the generally accepted scheme for the development of control over vocabulary.

These findings lead to other questions which badly need to be answered. Does the sentence structure in children's books influence the ease or difficulty of learning to read? To what extent? Can a scheme of order of difficulty of language patterns be devised which can be utilized in textbook writing? Can patterns of structure be introduced systematically and repeated until children read them with ease? Should tests to determine the difficulty of various syntax patterns be included in formulas for measuring readability? Does the scheme of linguistic analysis employed in this study suggest means of devising such a test?

This part of the present study raises more questions than it answers. Further research is needed along a number of lines before even the basic question of this study can be answered conclusively.

Relationship of Language to Reading and Listening in the Sixth Grade

The question of relationships between children's use of oral language and the skill they develop in oral and silent reading is one which seems to need study. Time and circumstances permitted relatively thorough study of the matter only at the sixth-grade level (though a little work was done at the second-grade level). Consequently, the fifth major question concerned the relationships that appear at sixth-grade level between the structure of children's oral language and their silent reading comprehension, oral reading interpretation, and listening comprehension.

Standardized tests of silent reading comprehension, recordings of oral reading interpretation, and pencil and paper tests of listening comprehension indicated that a relationship did exist at the sixth-grade level between children's use of oral language and the variables studied. Certain points appeared noteworthy:

1. Children who ranked high in silent reading comprehension, oral reading interpretation, and listening comprehension made more use of the common structural patterns than did children who ranked low on these variables. The use of these patterns was more closely related to listening comprehension than to any other variable.

2. These high-ranking pupils used fewer short utterances and had a higher mean sentence length than did pupils in the low-ranking group.
3. The children who ranked high on these variables made greater use of movables and elements of subordination and elaboration than did children who ranked low on these variables.
4. Utilization of the chi-square test of significance showed significance at the 1-percent level between use of movables and oral reading interpretation, significance at the 2-percent level between use of movables and silent reading comprehension, and no significance between use of movables and listening comprehension.
5. The chi-square test indicated no significance between use of elements of subordination and silent reading comprehension or listening comprehension, though there was significance at the 1-percent level between the use of elements of subordination and oral reading interpretation.

Obviously, much more study is needed of relationships between children's use of language and these variables.

Concluding Statement

The value of this research resides mainly in the evidence it has produced regarding the patterns of linguistic structure commonly used by children and the tremendous flexibility with which children use these patterns in their oral language. It seems safe to say that children learn fairly thoroughly at an early age the basic structures of their language.

The oral language children use is far more advanced than the language of the books with which they are taught to read. Perhaps this is as it should be, but evidence is needed as to whether children would be aided or hindered by the use of sentences in their books more like the sentences they use in their speech.

It is possible that children need help in recognizing and understanding the entire phonemic scheme of English, not only the basic phonemes that are built into morphemes but also the suprasegmental phonemes of pitch, stress, and juncture as they use them in oral speech. Such knowledge might help children better to turn the stimulus of printed symbols into oral language patterns for both comprehension and interpretation.

No evidence is available regarding the relationship which may exist between children's use of basic structural patterns and the degree of grammatical correctness of their speech. It may be that instruction in recognizing, by means of ear, tongue, and mind, the basic structural patterns of English and their interrelationship will help with the teaching of grammar and usage.

EXPLORATIONS FOR INSTRUCTIONAL DESIGN IN EARLY READING PROGRAMS

A. R. MacKinnon

In teaching young children to read, we should be concerned not so much with the immediately observed products of learning as with the long-range development of language power. There are few persons who doubt the observable accomplishments of teachers during the early years of a child's school life. Whenever those outside the school are told about the beginning reading program, there is generally a unanimous endorsement—regardless of the methods being employed. Criticism of the reading program usually does not occur until after a child has failed or left school.

The most common criticism is not that the child is deficient in particular skills, but that he lacks independent power to interpret what he reads. By the time he has reached this point, no amount of remedial work can build those powers which should have been formed developmentally, starting from his first day at school.

There is one preeminent characteristic of the learning which must be encouraged: It must be so thoroughly done that it will orientate, equip, prepare, encourage, and provoke a learner to advance by his *own* energies in whatever regions may be his to explore for the rest of his life.

It follows that *what* is put before a learner and *how* it is put before him are of prime importance. My emphasis in this paper will be

---

Dr. MacKinnon is presently visiting professor of education at Harvard University. His paper, however, is based upon his work as director of research for the Toronto (Canada) Board of Education.

He stresses the importance of developing self-motivation and a desire on the part of children to explore the unknown. His research has convinced him of the need to develop reading materials which make greater use of the child's natural reactions to words, abstractions, and printed symbols. He feels that much more can be learned about developing better reading materials through a study of children's drawings and their own comments about them.

The reader will note that the views of Dr. MacKinnon and those of Dr. Durrell are somewhat different, especially concerning the relative importance of basic skills.

principally on the nature of *what* we need to select to prompt growth of language power. I shall be equally concerned with the arrangements of sequences and conditions for learning which some of our studies indicate are appropriate as first steps in learning to read.

Much is known today about the stages of children's development in spoken language. Much less is known regarding the conditions by which the stages are reached, and even less is known about *precisely how* the child accomplishes the mental feat of learning to use speech as an instrument of thought and feeling. It is the phenomenon of early speech development that we especially need to understand if we are to build an effective beginning reading program. We must, in effect, be able to help the young learner to move more directly from power in spoken language to power in written language.

The Experiment

For 2 years we have explored the speech and drawings of children from the age of 4 through age 5, as they progressed into the beginning stages of learning to read. We have attempted to examine the effects of various classroom conditions on children's speech and drawings. Our principal testing device has been comparatively simple. As the children have produced a series of drawings of their classroom, we have kept records of what they said about their drawings.

Various experimental conditions have been studied. For example, children who had junior kindergarten experience as 4-year-olds were compared at the senior kindergarten level with children who did not have this earlier school experience.

This is a critical year in our study, since we shall have an opportunity to determine how various conditions have influenced early progress in reading. Certain information has already emerged which provides guidelines for the design of instructional material. We have concluded that children's drawings represent a form of abstract thinking through which they explore, comprehend, manipulate, and control their mental world. As they gain increasing command of spoken language, we observe an increasing definiteness in the abstractions they employ in their drawings. Line, form, and color are used functionally to create a mental world.

We find that the child continually tests the relevance of abstractions to his concepts of the world. Comparing series of drawings and correlating these with children's comments about the drawings indicate how written and spoken symbols complement and reinforce one another.

The results of our research may be applied to the design of materials for first steps in reading. It is obvious that letters, words, phrases, sentences, lines, forms, and colors are not enemies in the child's mental processes. When he feels frustrated because he has to deal with too many new elements at once, however, he may simply leave out most of the elements in his drawings or refuse to say much about a drawing. What he says about his drawings is clearly related to items that have a clear, picturable examinable meaning.

Whether children should be introduced first to letters, sounds, phrases, or sentences can be answered by saying that we should start the child with all the elements *together*, but in such a controlled way that he can discover the relatedness of the various elements without excessive frustration.

Such materials would include sentences that have a central, general, clear, highly familiar meaning for the beginner. The meanings would be such that they might be illustrated by a picture or in other ways.

The design of reading material should insure that the learner will recognize the words presented to him in sentences. Differences between groups of simple sentences should be deliberately displayed. Changes of single words in a simple construction may help the learner see them as bricks for sentence building. Letter-by-letter variations between words should emphasize the manipulatory possibilities of these elements.

Children's Thinking

Children's thinking can best be described as a development of strategies for handling the tasks of written language. In the early stages, we stress familiar patterns in an effort to reduce the possibilities of error. As these patterns are shifted, there is an increased awareness that the patterns have been transformed in some way. The children react by searching the illustration for cues, by substituting known words for unknown words, by omitting parts of sentences, by inserting familiar patterns, and even by separating sentences into parts.

Our research indicates that design of instructional material makes a significant impact on the development of children's power in language. Also, the mental processes touched off by the instructional design seem to correspond closely with mental processes developed in the prereading period.

It is imperative that we have more extensive exploration to further an understanding of simplification in instructional design. We should seek to apply the knowledge provided by linguists concerning language structure. To date, few attempts have been made to reconcile the conflicts between various disciplines studying language. It is time this warfare ended, for it is taking place at the expense of children.

Much of the material for first steps in learning to read might be in programed form. This might reduce the superhuman load now imposed on the teacher. The range of individual differences among children in the first grade is so diverse that it is impossible to meet those diversities adequately, and many reading failures may have their genesis in overcrowded classrooms. Individualized, programed material holds the promise of freeing teachers to work more with individual children.

The conditions of learning to read, however, do not rest entirely with the design of material. Language learning is a social phenomenon, whether it involves comprehension, speaking, reading, or writing. Children can learn from each other and can, given the opportunity, aid each other in their learning.

Unanswered Questions

There are still many unanswered questions. What, for example, is the effect on learning to read when boys and girls are grouped separately? Does a conventional classroom provide a sufficient range of ages, personalities, and abilities to meet adequately the optimum conditions for learning from others? Team teaching has provided excellent opportunities to explore the latter question by removing grade barriers and by diversified grouping of children.

There seem to be unlimited opportunities in the coming years for conducting research on instructional design and social conditions of learning. We have only begun to understand how learning to read comes about and how such learning can be achieved most effectively.

YOUNG CHILDREN'S THINKING AND THE TEACHING OF READING

MILLIE C. ALMY

WHEN DOES AN AMERICAN CHILD begin to learn to read? When he watches his mother prepare his food from a can or carton covered with reading material? When he first pays attention to television? When he responds to his mother's "don't touch"? When he says his first word? When he encounters his first book?

Perhaps we cannot pinpoint such beginnings, but increasing knowledge of the way in which language develops and of the processes involved in auditory and visual perception suggests that such incidents as these are important steps in learning to read.

When I studied beginning reading in 1948, an important issue concerned the function of the kindergarten program. Was it to focus on preparing children for formal reading instruction and, if so, how? The issue as I saw it then was not between "all reading and no reading, but rather between two conceptions of reading in child development. One viewed it as a series of stages or levels, at each stage of which certain experiences were appropriate. The other viewed it as a more continuous process of reorganization, in which the reaching out for new experience was, at least in part, dependent on what had gone before."[1]

Recent interpretations of the work of Piaget, current studies of infant learning, and new appraisals of earlier studies of maturation and training lend considerable support to the latter point of view.

---

[1] M. C. Almy. *Children's Experiences Prior to First Grade and Success in Beginning Reading.* New York: Teachers College Bureau of Publications, 1949.

Dr. Almy is professor of education at Teachers College, Columbia University. She is well known among reading specialists for her research into the preschool reading experiences of children. At present she is consultant for a project designed to provide enrichment experiences for 4-year-olds in a disadvantaged metropolitan area.

In her paper, she stresses the importance of considering each child and his developmental history, rather than expecting all children to conform to the same readiness and instructional program. She has concluded from her own research and that of others that varied sensory and motor experiences are essential during a child's preschool years.

They also open up, as Hunt points out in his provocative volume *Intelligence and Experience*, the possibility that it might be feasible to discover ways to govern the encounters that children have with their environments, especially during the early years of their development, in order to achieve a substantially faster rate of intellectual development and a substantially higher adult level of intellectual capacity. Moreover, inasmuch as the optimum rate of intellectual development would mean also self-directing interest and curiosity and genuine pleasure in intellectual activity, promoting intellectual development properly need imply nothing like the grim urgency which has been associated with "pushing" children.[2]

Viewing the process of learning to read as one that both reflects and contributes to progress in intellectual development, I should like to examine some of the implications for beginning reading instruction that may be drawn from Piaget's theories and research related to them.

Piaget was concerned primarily with various aspects of children's thought in relation to the evolution of the mental operations involved in the adults' abstract logical thought. He traced this evolution from the earliest reflex behavior of the infant, describing how he thought such initially diverse functions as looking, grasping, and sucking gradually become organized into increasingly complex patterns, or "schemata." These schemata, originally occurring as actions, were eventually internalized and became mental pictures or ideas, to which words were attached, according to Piaget.

Once the ability to comprehend and to use words has developed, these ideas, it appears, are similarly organized into increasingly complex patterns and associations. For example (the illustration is mine), in infancy the child, in looking at, reaching for, and grasping a large ball, adjusts his prehension to its size and contour differently than for a small cube. Given enough of such sensorimotor experiences and the added stimulation of hearing these experiences described by others, he can ultimately apply the words *cube*, *ball*, *large*, *small*, *big*, *little*, *round*, and *square* appropriately.

We say that he is developing concepts. But such concepts remain for a long time highly personal and individualistic. They are, as some authors have termed it, "embedded" in objects. The child tends to make direct comparisons between objects, or his recollections of them, in his testing of whether a particular concept applies in a new situation. To illustrate, a 3½-year-old remarked while polishing apples, "These is round like marbles is round." When confronted with some candy "jawbreakers," he actually substituted them for marbles in a game.

---

[2] J. McVicker Hunt. *Intelligence and Experience.* New York: The Ronald Press Co., 1961.

At this low level, many concepts are still not freed from the examples in which they appear. However, this child's awareness of and verbalization of the property of roundness suggests that she had the rudimentary framework of associations or "schemata" necessary to handle incoming information relating to a variety of instances. Presumably, the impact of many such encounters finally transforms the notion so that it becomes a more adequate and somewhat more abstract concept of roundness.

The difficulties the child under the age of 6 has in dealing with properties or attributes apart from objects are epitomized in Piaget's experiments dealing with "conservation."

Here he asks at what point in development and through what kinds of environmental encounters a child comes to grasp the idea that a given amount or quantity is not changed by transformations in appearance. For example, does the child, confronted by an array of cubes that are spaced close together and then spread far apart, focus on the number of cubes, or is he distracted by the area they occupy? In the first instance he will "conserve," indicating that the quantity remains the same. In the second, he will maintain that these are "more" when they are spread out. (Those of you who have taught kindergartners have probably encountered children who wish to break up their snacktime crackers so they will have more to eat.)

Again, given two vessels of liquid that he has agreed contain the same amounts, does the child "conserve" the amount when that in one vessel is poured into another of different shape? Or does he pay attention to the height and width of the vessel successively (rather than dealing with the relationship between the two dimensions), so that he maintains that there is more in one than in the other?

These are but two of a variety of demonstrations that Piaget uses to test whether or not a child has achieved conservation, or in terms of the mental processes involved—"reversibility."

Piaget's collaborator, Barbel Inhelder, describes two forms of reversibility: "(a) negation, . . . in which a perceived change in form is canceled by its corresponding negative thought operation; and (b) reciprocity, as expressed in the child's discovery that 'being a foreigner' is a reciprocal relationship, or that left-right, before-behind spatial relationships are relative."[3]

---

[3] William Kessen and Clementina Kuhlman. "Thought in the Young Child." *Child Development Monograph,* 1962, vol. 83, No. 2.

Transition to operational thinking begins, according to Piaget, at around the age of 6. Changes in the concrete-abstract dimension of thinking represented in this transition are more or less paralleled by changes in the subjective-objective dimension of thinking. The older child is ordinarily less preoccupied with personal and emotional concerns, or perhaps better able to extricate himself from them and to consider the viewpoints of other people. His thinking is less often autistic and less often dominated by fantasy and imagination.

The research in which I am currently engaged has been concerned with the period of transition from a preoperational and subjectively oriented thought to a more operational and objective kind.

Young Children's Thinking: "Conservation" in Relation to Other Variables

We interviewed 330 children from kindergarten and from the first and second grades of two New York City schools, one middle and one lower class. Demonstrations and questions used to establish the presence or absence of conservation concerned a number of cubes following transformation in their appearance. In each instance the interviewer, prior to posing the crucial questions, used a series of training procedures to establish the child's ability to describe what he saw.

The interview also included demonstrations and related questions about the floating and sinking of a variety of objects. We gave the Stencil Design Test and the Ammons Picture Vocabulary Test. From school records we obtained measures of reading readiness and achievement, understanding of mathematical concepts, and Pintner-Cunningham IQ scores.

The general trends described by Piaget are substantiated by the results. In the middle-class school 10 percent of the kindergartners, 30 percent of the first graders, and 46 percent of the second graders gave substantial evidence of the ability to conserve. In the lower class school, where bilingualism was a complicating factor, the trend toward increasing ability with age appeared to be less clear and much slower. The percentages were 4, 7, and 22.

The measures of reading ability were those used in the New York City schools, the New York Tests of Reading Readiness and Reading Growth. Since we did not administer the test ourselves and have had access to only a portion of the test booklets, we can only regard our results as suggestive of relationships that might be examined through further research. At the first-grade level in the middle-class school, the children who "conserved" did significantly better in the reading readiness tests than those who did not "conserve." The differences were not statistically significant at the second-grade level.

We are now trying to determine the role of verbal intelligence and other factors in the ability to conserve. Our present feeling is that whatever is tested by the Stencil Design Test is contributing more to conservation ability than is sheer verbal ability.

Implications for Beginning Reading Instruction

Many of the implications for beginning reading instruction that emerge from Piaget-inspired research have to do with concept formation. To neglect providing many and varied concrete experiences in the period of preoperational thought may later hinder the adequate development of abstract thinking and may possibly interfere with the development of reading comprehension.

Piaget's theory further implies the necessity that the child discover his own errors in thinking in such fashion that he, himself, attempts to correct them. The adult cannot think for the child nor can he impose adult answers on him. Rather, he paces the child's understanding with increasingly varied and complex problems so that the child becomes aware of his own error, rearranges his information, and moves gradually to a new synthesis.

This emphasis on active experimentation clarifies the role of play in the intellectual life of the young child. From it, some support might be found for the postponement of reading instruction.

More apropos is a consideration of the ways young children deal with printed words and letters. Given a reading environment, a child may begin as early as the nursery school years to search for meaning in printed symbols. When he confronts a word similar in configuration to one he has already learned, he tends to assume it is the same until he has learned to search the surrounding text or picture for confirming or negating information.

As to specific training for the visual and auditory perception aspects of learning to read, it may be that many of the discriminative abilities that go into the reading process are developed, or fail to develop, long before the child is brought to kindergarten, even prior to nursery school. What goes into the typical reading readiness program at the first grade, or in the kindergarten, may represent for some children too little and too late; and for others, too much and too soon. For example, exercises to facilitate the perception of gross differences may come long after a child has learned to make such distinctions accurately. On the other hand, exercises in noticing subtle differentiations in detail, such as those involved in distinguishing a *p* from a *g*, or in maintaining a left-right orientation, may come before a child has had the variety of experiences requisite for the development of such skills. A child who has not achieved "reversibility" in his thought processes and who does not understand reciprocal relationships may lack the stability of perception necessary for formal reading instruction.[4]

A recent study by David Elkind, replicating earlier Piaget experiments, indicated that a majority of children under the age of 7 lacked a differentiated concept of left-right.[5]

We can speculate on the most effective way to insure steady progress toward learning to read in the years before formal instruction. An environment that provides the child with many opportunities for varied sensory and motor experiences is essential. So, too, is the presence of people who talk *with* (not merely to or at) the child, people who read and write and who share these activities with children.

Current research in young children's thinking indicates that it is desirable for those responsible for the child's instruction to be skilled in appraising his discriminative and thinking abilities. Thus, the experiences provided him can be more effectively designed to further both his intellectual development and his progress toward learning to read.

---

[4] David P. Ausubel. "Stages of Intellectual Development and Their Implications for Early Childhood Education." Paper presented at the First Institute on the Concept of Development and Early Childhood Education, New York City, September 1962.

[5] David Elkind. "Children's Conceptions of Right and Left," *Journal of Genetic Psychology*, 1961, 99, 269–278.

A Look Ahead

BLANK PAGE

A LOOK AHEAD BY THE READING SPECIALIST

ARTHUR I. GATES

THE GENERAL PATTERN OF TEACHING READING has not been modified much during the last quarter century. It has probably changed less than many other aspects of education and community life. The educational and social scene today suggests that it is time to reconsider almost everything involved in the teaching of reading. Since home and community activities as well as the school program affect learning to read, they should also be considered.

The Age of Beginning Reading

One of the oldest issues, the age of beginning reading, is concerned as much with home and community activities as with the school. Around the turn of the century, John Dewey, Edmund Huey, and others contended that social as well as psychological and educational factors favored the delay of beginning reading until the seventh or eighth year. When this problem was revived in the early twenties, it was contended that children could be taught to read the printed word about as early as they learned to speak, but that when all things (especially practical conveniences) were considered, it appeared that the traditional age of 6 or a bit later was as good as any for the average child. It was pointed out, of course, that earlier years were probably better for some and later times for other children.

Recently the issue has been presented again in lively fashion. Several conditions suggest that it is now easier and more desirable to

---

Dr. Gates, professor emeritus at Columbia University, has long been recognized as one of America's foremost authorities on reading instruction. He questions many of the long-established and currently accepted principles governing the teaching of reading.

Dr. Gates believes that basal readers leave much to be desired as instructional materials. He feels that new educational media may provide a breakthrough on some of the instructional problems which have confronted reading specialists. Central in his paper is a plea for more venturesome, thoroughgoing research in reading.

teach reading at an earlier age than it was in 1920. To illustrate, a father wrote me a short time ago that his child near her second birthday learned to read the word "Texaco" as it rushed toward her in increasing size on the television screen and was shouted at her with increasing vehemence by the announcer. This child began to pick up other words observed on signs and on television and was soon reading quite merrily.

Many persons have asserted recently that children under 6 acquire a much larger vocabulary, more general information, and greater sophistication now than formerly and that, therefore, they should begin to read earlier. This is a reasonable view, but is it not equally plausible to assume that the many new types of opportunities and incentives are now promoting learning so well that early reading is needed less than formerly? It is possible that introducing reading earlier would decrease rather than increase their knowledge and skill and their interest in other possibly more fruitful media of learning during these early years, which the late Leta S. Hollingworth called the "Golden Age of the Intellect." Several educators in Sweden indeed are convinced that modern conditions justify their present practice of waiting until the child is 7 years of age before initiating reading.

The real issue is not whether children can be taught to read at 4 or 5—of course they can—but whether a child's educational development as a whole will be fostered more by continuing to introduce reading at a median age of about 6, as at present, or shifting to an earlier or later age, or discovering ways of finding the optimum age for each child. It would be a pity if today's investigations are concerned only with the earlier years.

Reading Readiness

All of you are aware that the typical reading readiness program is based on relatively limited objective data. We need more information concerning what phases of it are useful and what are futile. Probably much that now occupies the several weeks or months in the first school grade could be eliminated or introduced more profitably at an earlier time. As was pointed out by Dorothea McCarthy and others recently, and by Huey more than a half century ago, many of the interests and skills involved in learning to read in school probably can best be learned at mother's knee.

Whatever age is adopted as the "normal" one for beginning reading, some children can start earlier and others should start later for optimum results. The one certain outcome of research on the age of beginning reading is that an educational-psychological study should be made of each child to determine the best time and method of introducing him to reading.

The Literary Tradition and Everyday Needs

For various periods of time, reading instruction has been dominated by certain traditions which should now be reexamined. For example, for nearly a century teachers of reading have been heavily engaged in efforts to cultivate literary appreciation. Although the twenties witnessed a revolt against this exclusive dependence upon classical literature, the tradition continued to prevail, at least to the extent of using narrative materials almost exclusively in the basal readers. Today the typical basal readers consist almost wholly of story materials; publishers of basal readers struggle to outdo each other in offering the most interesting material. This tradition should be challenged.

The reading materials with which most persons are confronted today are far from literary classics. The 5-year-old child at home, the 12-year-old in school, and the adult in his business office are faced most of the time with ordinary, workaday stuff. The printed materials encountered on television, in store windows and street advertisements, in correspondence, and in the flood of circulars, advertisements, periodicals, business letters, trade journals, automobile license applications, and directions for operating numberless gadgets are a far cry from the classics. The typical reading course does not pay much attention even to such critical words as *stop*, *go*, *beware*, *look out*, *danger*, *poison*, *keep out*, and *exit*. The teaching of reading should be critically reviewed to determine whether it is properly meeting the practical as well as the cultural demands of everyday life today.

Importance of Teaching the Most Useful Techniques

We should try to determine the relative importance of the various abilities and skills which our teaching undertakes to produce. For example, the type of phonic instruction which aims at teaching a large number of phonic items and conventions, in some cases several hundred, really cultivates quite different skills from those resulting from the type of phonic instruction which undertakes to develop a certain few more general techniques, maneuvers, and insights. There would seem to be a difference between the outcomes of teaching 30 or 40 letters and symbols for each of the 40 or more phonemes found in English words and, for example, the type of teaching which would embody Jerome Bruner's method of discovery. The latter, moreover, might seem to lead to different final outcomes from those obtained by means of study based on B. F. Skinner's system of "programing."

We need to determine clearly the nature and values of the many different types of habits, skills, techniques, insights, and general maneuvers which result from all the forms of teaching. This can be done best by increasing the quantity and quality of the intensive observation and exacting experimental analysis of pupils' performances more typical of the laboratory and clinic than of the large-scale control group comparisons.

Developmental Sequences

Indeed, we should now challenge every important component or characteristic of basal reading programs, old and new. Most programs embody a complex developmental sequence of interests and abilities. These arrangements have been variously suggested by the results of research in reading and child development, by general theory of learning, by observations of practical work in schools, and by the hunches of editors, teachers, and authors. It is now time for a reappraisal of these complex factors and their components.

The Basal Program and Individual Differences

We should now frankly recognize that the typical basal program is incomplete, rather poorly organized for certain purposes, and in many ways probably less than perfect when viewed in the light of modern experimental and practical evidence, such as that being marshaled in support of "programed learning." To a large degree, these deficiencies have resulted from the conviction of publishers and educators that schools could not afford the amount and types of material needed for a more adequate program. As a consequence, the typical basal program leaves much to be desired for the purpose of adjusting instruction to the wide range of individual differences found in a typical classroom.

When one adds the effects of deficiencies in teacher training, the ever-increasing instructional demands made upon the teacher's time, and certain other factors which I shall mention later, it appears that the typical basal reader program makes more demands upon the average teacher than her time and talent enable her to meet. Through the use of information and skill now available, the entire program of basal materials can be made more adequate in quantity and flexibility for the purpose of helping the overburdened teacher meet the bewildering array of individual needs in her class.

Influence of School, Home, and Community

We should not overlook the fact that the teaching of reading suffers from many influences which are not limited to reading but which affect school life and teaching in general. Following are typical examples of the "gripes" most frequently mentioned recently by a large group of New York City teachers:

- Too many clerical and nonteaching responsibilities which rob teachers of time to teach.
- Too many students in an average class.
- Excessive interruptions of class work, such as public-address announcements and collecting of milk money.
- Inadequate number of unassigned periods when teachers could prepare for classwork.
- Inadequate programs for seriously disturbed children.
- Faulty communications of aims between teachers, the board of education, and parents.

The amount and kind of reading ability a child acquires depends greatly on the interests and activities prevalent in his home and neighborhood as well as on the methods and materials made available to him in the school. This conception should now be explored thoroughly. I am glad to observe that the Carnegie Corporation is supporting basic research in this area.

New and Old Types of Research

Various other studies now being promoted by John Gardner, president of the Carnegie Corporation, are of utmost importance in pointing out ways in which the whole school program can be changed in the interest of improving the teaching of reading. Mr. Gardner considers this the greatest responsibility of the school. The Ford Foundation and other groups are fostering research in reading. I shall offer comments on research enterprises with which I am familiar.

Recent Research Unduly Concerned With a Few Old Issues

It seems to me that investigators of reading have tended during the past two decades to narrow their field of operations and to become more alike in their systematic outlook. We should begin to break out more vigorously in new directions. The recent barrage of criticisms has tended to further this drift toward uniformity by keeping reading investigators too much preoccupied with a small number of practices, most of which are not new creations but revivals of procedures introduced long ago. The teaching of phonics is a prime example. Most of the ideas and systems so vociferously advocated recently have had a century of trial during which their values and limitations have been considered repeatedly in theory, in practical tests in classroom work, in individual remedial instruction, and in various experimental situations. A recent study seems to me to present the significant facts more clearly and critically than any preceding investigation. For this reason I should like to report it to you briefly.

A Crucial Study of the Value and Limitations of Phonics

A full report on this study will be published by Frederick B. Davis of Hunter College. During his recent period of study in the Philippines, Professor Davis found that a program confined largely to systematic phonic instruction had been tried out for several years in comparison with a typical modern multiple approach in teaching children to read their native language, Tagalog. Tagalog is a remarkably simple and almost perfectly consistent phonic language. It contains only about half as many phonemes as English, each of which is almost invariably represented by one and only one printed letter, and each letter almost always represents only one sound. Here, then, is the crucial test. If instruction largely confined to conventional phonics can succeed anywhere, it should do so in teaching Tagalog. Fortunately, the study appears to have been tried out in the Philippines without prejudice and in a calm spirit of experimentation.

Experimental conditions were admirably controlled; comparisons were made at the end of the first and second year of instruction. In a preliminary analysis, children were paired on the bases of age, mental age, attendance, equipment, teacher ability, and scores obtained from several tests of reading, spelling, social studies, and other subjects. Even in this conspicuously consistent and simple phonic language, the multiple approach was as good as, indeed probably better than, the almost exclusively phonic method.

English was introduced at the beginning of the third year. Tests given at the end of the year showed that the children who had been taught by the more varied, multiple approach made the transition to reading English better than those taught by the more exclusive phonics program. Their mean test scores were conspicuously greater in reading, language, and dictation, and considerably better in social studies and arithmetic. Professor Davis, who has never been involved in controversies about phonics, believes as I do that this is crucial and convincing evidence of the superiority of the multiple approach and the limitations of the largely exclusive phonics method of teaching reading. If anything is clear from the history of teaching reading, it is that traditional phonics is no panacea. The issue that so many have been shouting about recently is now demonstrably a dead issue.

The Use of Augmented Alphabets

Many persons have looked hopefully for a renaissance based on teaching words composed of an augumented alphabet—that is, a longer but phonically more consistent alphabet, of which there are now several—before introducing the conventional 26-letter form. It must be said that this system, at least in principle, has also been tried out in theory and practice off and on for nearly a century. Whether the additional visual symbols number 10 or 20, whether they are new visual figures or conventional letters used both singly and combined or converted into a new visual pattern by means of diacritical or other marks, whether the new words are very similar or dissimilar to conventional printed words, the principle is the same.

This system in various forms was widely used in American and English schools before the turn of the century. G. Stanley Hall, Dewey, Thorndike, and others were critical of it long ago. Huey reviewed it extensively without enthusiasm in his book published in 1908.[1] Although Winch began work on it with great expectations in England in 1904 and labored for more than two decades to find ways to make it work acceptably, his report[2] offered little to encourage teachers who found it a difficult and demanding form of teaching.

In most if not all of the previous studies involving an augmented phonetic alphabet as the basis of initial instruction in reading, intensive teaching of phonics was basic. Our English friends, Sir James Pitman and Prof. John A. Downing, however, state that the method they have developed is designed to employ a multiple approach, or as they say both the phonic and the "look-and-say" teaching. The trend of current theory and of research findings implies that spending relatively less time and emphasis on phonics and more on other components of the multiple approach would give better results with the Pitman or other augmented alphabet forms, even more conspicuously than was true of the teaching of Tagalog. The Pitman plan can contribute only by virtue of its simplification of the phonic system. To illustrate, the Pitman plan would not help (on the contrary it would hinder) deaf-mute children's efforts to learn to read. It would give them two forms, instead of one, of most printed words. To overcome the disadvantage of learning one only to discard it for another, the plan would have to assist greatly the cultivation of phonic insight and skill. And, as the Tagalog experiment demonstrates, it should do this in a multiple approach without too much concentration on phonics.

---

[1] Edmund Burke Huey. *The Psychology and Pedagogy of Reading.* New York: Macmillan Co., 1908.

[2] W. H. Winch. *Teaching Beginners To Read in England.* Bloomington, Ill.: Public School Publishing Co., 1925.

My comments on phonics and augmented alphabet methods should not be taken to imply that I think the use of phonics is futile or that improved methods of teaching phonics cannot be found. On the contrary, new ventures should be vigorously sought and tried out. Among them are other extended alphabets, such as the New Single-Sound Alphabet and the World English Alphabet. There are also some quite different approaches with conventional English. For example, I am especially impressed both with the ideas and the methods being employed now by our Canadian neighbor A. R. MacKinnon, whose book *How DO Children Learn to Read?* I have recently read. Plans which use the conventional alphabet but introduce phonics in simplified and graduated forms designed to reduce the confusion and difficulty of conventional phonic training have been suggested by John B. Carroll and others. I hope all these approaches may be tried out long enough and widely enough to test their value after the honeymoon fervor—the Hawthorne effect—has dissipated.

Individualized Teaching

There are other practices long in use which have been recently advocated with great vigor. For example, "individualized" teaching methods have for 60 years persisted in form similar to practices proposed by John Dewey and others at the turn of the century. These persons felt that children learned better at home by what Huey called the "natural" method, in which they were left largely to their own devices, but supported by warm encouragement and commonsense suggestions. Such a procedure represents the major feature of a number of programs which have been tried out in various schools during the past 65 years with results that are good, bad, or indifferent, depending upon the details of the program and the skill of the teacher.

There or other types of instruction designated as "individualized" teaching which also embody excellent features, such as a strenuous effort to tailor instruction to individual needs. They emphasize the importance of all-round teaching skill rather than any particular method. They demonstrate certain limitations of typical basal reading programs, and the very fact that "individualized" teaching tends to be difficult and time-consuming is evidence that even the best teacher needs suitable materials and opportunities, now not as abundant as they should be, to enable here to use her talents most efficiently.

In what new directions can one turn for suggestions for improving reading? I think I should confess that the most promising practices are likely to be those which do not occur to me! Perhaps my limitations are responsible for my feeling that we shall do better by looking to the present and the future rather than to the past. I shall offer only a suggestion or two concerning promising possibilities among the many which all of you here today can perceive more clearly than I.

The Teachers' Attitude and Activity

First of all, I suggest that we study the amount and kind of direct and definite teaching now devoted specifically to reading. It is my belief that during the past quarter century there has been an increasingly widespread acceptance of a kind of laissez faire attitude toward the teaching of reading. John Gardner and others have noted and deplored the tendency to give the teaching of reading far less time and attention than it deserves, both in schools and teacher training institutions.

In addition, a shift of emphasis from the "subjects" to children has led many teachers to adopt a kind of easygoing approach to reading, even when they are teaching it, which has introduced such a degree of unguided learning that many youngsters have not been getting a sufficient amount of skilled, direct instruction. I have seen several instances during recent years in which the average reading abilities of pupils have been markedly increased as the result of the teacher merely getting down to the business of teaching reading longer and more seriously, without any change in her skills or methods. Incidentally, this phenomenon is likely to result in all sorts of materials and methods getting credit for achievements due mainly or entirely to the effect of better teacher application to the job. It may thus become, unless we are careful, as confusing at it is potent.

A storm of recent criticisms has made teachers anxious to make obvious changes. Some of them, I fear, may be changes not for the better but for the worse in every respect except effort. Teachers need help as never before, as Prof. Mary Austin and her colleagues have shown. A problem of major importance is how to provide them with such help. Reading specialists have in the past neglected this field. It should receive our immediate attention.

Importance of General Psychological Theory

I believe that investigators of reading should give greater heed to general psychological theory, especially the theories of learning relating to the higher perceptual and intellectual processes. Neglect of theory has resulted in work in the field becoming less well coordinated, and less easily and clearly interpreted. Cattell, Judd, Thorndike, and other earlier leaders were primarily scientific theorists and secondarily investigators of practical school problems. General theory not only serves one in case of absence of experimental or practical guides, but skillfully employed it also suggests promising new possibilities.

Neglect of psychological theory can result in failure to observe important new developments. This is apparent at the present time. For example, it appears that students of reading have been slow in studying the possible advantages of teaching machines and programed learning practices which grew out of the work of Skinner and other general experimental psychologists. I feel that we should explore critically and thoroughly all the new devices in the teaching of reading.

It is quite possible that the results of many studies in which one procedure is compared with another (excluding those in which the Hawthorne effect takes over the controls) are due more to the effectiveness with which the materials are programed than to any intrinsic superiority of the materials or procedures. It is consequently possible that all sorts of inferior material and general procedures will soon flood the market. The task of distinguishing the wheat from the chaff in all the new packages is indeed a tremendous one, but professional students in reading should not be confined to evaluating the creations of others. They should become inventive leaders.

Possible Uses of Modern Mechanical Devices

We should explore other uses for mechanical devices. To illustrate, 40 years ago when I was trying out methods of teaching congenital deaf-mute children to read, I observed several kinds of visual analysis of printed words which, I felt, might be useful to normal children. Some of these techniques which proved to be rather difficult to teach without expert demonstration could now be taught readily by means of sound motion picture devices, especially the modern slow-motion procedures. If such skills could be taught successfully by motion picture and television projections, they would strengthen the team of visual, phonic, and other skills already available. Television and sound motion pictures, moreover, seem to offer improved means of helping teachers learn how to teach expertly and how to acquire greater skill in many subtle phases of instruction, skill which is now mastered by relatively few.

New Types of Research

A final suggestion is that some of the quite new approaches developed in other areas of psychology be brought into the teaching of reading. An example is an approach sometimes referred to as "systems development approach" and "component task analysis." Work with this approach is being carried on mainly by psychologists in the armed services. Some of these investigators have found that such applications of "principles of learning" as giving the learner knowledge of the results of his trial reactions, or providing typical supervised practice or the use of spaced practice are not invariably helpful and much less potent than certain new principles and practices.

R. M. Gagne, for example, sums up his brief article, "Military Training and Principles of Learning," in the *American Psychologist*, February 1962, as follows:

> If I were faced with the problem of improving training, I should not look for much help from the well-known learning principles like reinforcement, distribution of practice, response familiarity, and so on. I should look instead at the technique of task analysis, and at the principles of component task achievement, intratask transfer, and the sequencing of subtask learning to find those ideas of greatest usefulness in the design of effective training.

There seems little doubt that here is emerging both a new type of investigation and novel guiding principles. The learning situations encountered in teaching reading and the language arts are the kinds with which these workers have been most successful.

Concluding Statement

In concluding, I should like to say that the rather broad type of pattern of research work, mainly oriented in an eclectic attitude, which characterizes most investigations of reading and the language arts in

American universities, has been very productive, and more and better work in any one of these lines is desirable. It is noticeable, however, that some of the most productive types of approaches employed in the past, for example the laboratory-experimental approach, have not flourished in recent years. Moreover, there are new and promising types of investigation and theoretical explanation which are not, as far as I know, being pursued extensively in reading and the language arts by any group in any American university. It should not be assumed that the few I have mentioned are the only ones. I offer them merely to suggest the importance of considering some of the quite new types of attack. Never, during the years in which I have observed the scene, have the opportunities for both thoroughgoing and venturesome research been as great as they are today.

A LOOK AHEAD BY THE TEACHER EDUCATOR

AMY HOSTLER

A LOOK AHEAD IN TEACHER EDUCATION as to the scope and practices in teaching reading at the primary level does not indicate any overnight change in existing programs. We have, in our elementary schools today, excellent as well as poor programs in reading. The same holds true in teacher education where prospective teachers learn methods of teaching reading. Both represent a wide range from the earliest known alphabet method through the recurring systems and include the current practices we have heard discussed at this conference.

Ever since the recognition of the printed word became a symbol of learning, there have been differing opinions and open controversy on methods of teaching reading. In spite of this, "old methods never die." Methods come into use and, in some cases, go out of use as frequently as fashions change. They might easily be dated and the dates placed on the rim of a revolving wheel which, when spun, would turn up the same or a similar method with surprising regularity from decade to decade or even generation to generation. As Dr. Nila Smith and Dr. Arthur Gates have pointed out, the phonetic methods are well-known examples of such recurrence.

We sometimes find a teacher who uses a particular instructional method next door to one who uses another method. Frequently, teachers manifest very little interest in examining different methods or in discussing them. There is often open resistance to change. In fact, any change might come only through administrative direction. This might be called the closed-mind attitude. Is this the result of the type of preparation these teachers had or is it a personality trait or a com-

---

Teacher education has been under fire from both professional leaders and those outside the profession. Here a teacher educator suggests ways in which colleges of education might do a more effective job in preparing teachers of reading. Dr. Hostler is president of Mills College in New York City.

She does not foresee any radical changes in teacher training, but urges flexibility and eclecticism on the part of teacher educators. She also stresses the need for more rigorous screening of prospective teachers.

bination of both? We have such instances throughout the country. We must, as we go forward, find ways to change what is apparently now a way of thinking, a narrow and rigid approach to the teaching of children. Unfortunately, many teachers still quote, whether accurately or not, "At ——— college we do this" or "believe this." Others say, "I studied under Dr. ——— who is an authority on reading. He believes and teaches that ———."

A young man, recently returned from a period of Army service, registered for the teacher education program at a recognized institution of higher education. He said at a conference recently, "I cannot believe what I'm being taught. We're using a 1929 text because it is the book written by the teacher. I don't believe he has had a new idea in all that time."

This is an unfortunate but not untrue report. Teacher educators who resent it must go far beyond the old methods and materials courses, and focus on developing insight into child nature and the methods that will foster child growth and development. This insight should help the teacher to make decisions that are right for each child. By *right*, I mean more than methods; I refer to timing and rate of growth and the child's own readiness. We should know *when* as well as how to begin reading, not on the basis of when the child *can* begin to read but when he *should*. These may be several years apart in time.

Colleges and universities engaged in teacher education are striving to do a better job today. They are setting new goals for their institutions, which in turn will affect the graduates, our new crop of teachers each year. These new goals are broader than one area of subject matter, and they will affect teaching in all its aspects.

In today's world, the teacher of primary grades must be just as well educated as the high school teacher. She must have knowledge, special abilities, and skills. She must possess an understanding of child growth and development, and of the learning process. She must be sensitive to the needs of the child and must find ways to meet these needs. This is a large order. Granted the opportunity to select students for teacher education with these powers and potentials, we can "look ahead" to new and more creative approaches to the problems and the processes involved in primary reading.

The teacher of tomorrow will have a continuing interest in studying how children learn to read. She will not be content with using one method in the hope that all children in a given group will eventually learn to read. She will give one child, or several, the necessary phonetic training which will lead to independent reading. But with others, when she notes an ability to grasp words, phrases, and sentences with almost photographic accuracy, she will use a different method. In between these two extremes, she will utilize a variety of approaches without focusing on any one to the exclusion of others.

A Single Method Unlikely

I see little likelihood that any teacher educator of the future will devise a single method which could be agreed upon as the only effective way to teach reading. One approach can never suffice so long as we have many children with individual differences. If the teacher educator approaches the teaching of reading from an eclectic point of view, teachers are likely to show a greater degree of openmindedness toward change, toward experimentation and research.

The teacher educator will expect the young teacher to leave her preparatory work with an anticipation and a sense of exploration that will make each child's success in reading a challenge to her. When this becomes generally true, we shall have a release of the creative potential of the teacher in developing skills and methods adaptable to each child. It is my belief that we have scarcely touched this creative source of power.

Points To Consider

Our main concern must be how to make this prediction come true. Its fruition calls for greater emphasis on teacher education programs, based upon a study of child development and the learning process, with provisions for research in both areas. It also requires an honest appraisal of present teacher education programs. We will reevaluate our own preparation, and as teacher educators we will make sure of the following:

1. Acquainting the student with history and practices in the teaching of reading, and helping him to relate these to the development of the child.
2. Studying special methods of reading now in use.
3. Studying the variety of current programs in operation in home teaching, team teaching, track and dual-track teaching, Montessori teaching, and programed instruction, in cities such as Denver, Ossining, Oceanside, Hicksville, Greenwich, and Rye Neck.
4. Studying research reports in beginning reading and relating these to classroom practice.
5. Developing and experimenting with programed materials for beginning reading.
6. Learning to use special audiovisual materials or programs (TV and radio) and helping to produce them.

By these means, the teacher educator will help his students to keep an open mind, to discover the strengths or weaknesses in all methods, and to discover how to make use of multiple approaches to reading instruction.

We must work toward having teachers think critically about children and their individual needs and about how they learn, rather than looking for a quick, common answer or adopting only one prescribed traditional method or new system. When school systems adopt a particular method exclusively, the teachers must be equipped to evaluate the procedure in the light of child development principles. Moreover, if need be, they must be prepared to show how better results might be secured in a sounder approach.

A Final Word

If the core of our profession is the teacher, and I cannot see it being shifted to any other, then the role of the teacher and the teaching process remains in his hands. If this is true, then the teacher must become more a verbal spokesman for our profession by knowing *what* other teachers are doing and *why* they are doing it. The teacher educator must aid in developing this ability. He must also be concerned with the preparation of principals and superintendents—of all who are in positions of leadership. The teacher educator must assume some responsibility in helping these administrators acquire a general understanding of learning.

If schools mirror the pressures of our society, then the teacher educator must become even more of an expert in helping the future teacher develop a strong personal philosophy of education which he will examine and reexamine throughout his professional life. He must have the strength and conviction to modify his ideas and practices whenever new and acceptable knowledge becomes available.

In our look ahead as teacher educators, we must recruit students who have the courage and wisdom to learn and to apply things not yet known. We must not depend too much upon a fixed time schedule of 4 years of preparation and a fixed number of credits. Instead, we must begin to work toward needed qualifications which include general and professional knowledge, a high level of critical thinking, and the ability to work intelligently, independently, and creatively. Prospective teachers who meet these standards will continue to be learners. They will, as they become involved with their teaching, define more clearly the methods they use and they will keep a clear focus on the child.

Exploration is no longer confined to space, the secrets of the seas, or the earth. Today it must, for the teacher educator, include preparation in the teaching of reading—one wide gateway to the child's intellectual growth.

A LOOK AHEAD BY THE CURRICULUM PLANNER

GRACE A. DORSEY

AS THE CURRICULUM PLANNER LOOKS AHEAD, he realizes that there must be changes not in reading alone, but in the total school program. School curriculums are continuously changing. With new research and experimentation, the development of new and better materials of instruction, and more information concerning children's growth and growth differences, there is a challenge to provide the best possible programs for all children.

We have seen considerable pressure to begin the teaching of reading earlier than was formerly thought to be best. Many parents are concerned about the program in kindergartens and "the poor start" they are told "their children are getting in school." They have read articles in the popular magazines and have seen the cartoons and comics sometimes ridiculing the school; and, although in most instances they believe in their school policies and practices, they are anxious that their children have the best possible start in school. Other parents in those school systems where kindergartens are not yet a part of the school program believe their children should start to school earlier. Some school administrators also think this should be done.

Enmeshed in this concern for earlier admission and a change in kindergarten emphasis is the pressure to start reading earlier because of the belief that children know more than in years past, that they have had more and richer experiences than formerly, and that many have learned to recognize a number of words or in some cases have actually learned to read before they start to school.

Mrs. Dorsey is assistant director of instruction for the Maryland State Department of Education. Based upon her long experience as a classroom teacher and her close association with experimental and developmental programs in Maryland, her paper voices a strong plea to preserve the rights of young children.

She urges wider use of individualized instruction and smaller classes. She also suggests problem areas in which inservice programs might provide instruction and information for teachers.

Protect Children's Rights

The conscientious curriculum planner must have the courage to protect the rights of young children to develop normally in their first years in school. I believe the kindergarten curriculum should be concerned with the child's language development, and that it should provide him with information about his environment and an opportunity to explore and to develop an appetite for learning. He should have time to get better acquainted with stories and books and to play and work with other children. It should be a wonderful learning time. All this is the beginning of reading—not formal—but a meaningful important beginning. Symbols may be introduced, but they should be used as a natural, functional part of class or individual activities.

Superior programs in reading demand highly differentiated instruction. There are several means by which good programs can be fostered. More materials with greater variety of content than we have used in the past are needed in our classes to meet individual interests, skills, and achievement. A reading program demands much more than one textbook per child. There should be numerous sets of texts to meet the reading levels of the children and a large number of good library books on various subjects and at different reading levels, as well as other kinds of materials.

Worth The Reading

Much consideration should be given to the content of basal reading materials to assure that they are specific to the actual activities of children, that they coincide with children's speaking vocabularies, and that they are worth the time and effort of learning to read them. I'd like to emphasize particularly this last criterion—"worth the time and effort of learning to read them." It is doubtful that some of the materials in some of the newer experimental programs would be used if selected for the worth of their content.

The manner in which pupils are organized for learning may influence expectancies in learning. Shall we continue with grades? We know that children's abilities in any single grade vary and that there is a wide range of achievement. Yet, we continue to think in terms of grade standards rather than individual achievement. The ungraded or continuous progress plan of organization in a school seems promising, for it provides for a wealth of enrichment and permits children to progress as rapidly or as slowly as they need to, as they use suitable, challenging materials which may have been traditionally designated for another group. Such a plan is a way of putting into practice a philosophy that values progress and success for the individual child. To put it into practice "necessitates viewing the curriculum as an unbroken though irregular continuum of learning for the child."[1]

More attention to ways of involving more individual pupils in reading activities during group instruction could make reading periods more interesting and challenging to many pupils. Observers in almost any reading class will see that too few children are actively involved in group instruction. The same pupils respond frequently; others participate little or wait hopefully for something to do or say. The school day is too short and present classes are often too large for each child to be able to take part in even our best group work. We must invent new procedures and find different means to increase the amount of learning in reading classes. Even young children can learn to work in pairs and in small groups without constant supervision from the teacher. The teacher-and-one-pupil-at-a-time as other children in the group wait their turn needs considerable supplementation.

Even as the above is said, recognition must also be given to the importance of individualized reading with teacher-pupil conferences when the teacher works with each child apart from the others in the group. This is exceptionally worthwhile in the early stages of reading when each child in a class has the opportunity to talk over his own experiences, to dictate to the teacher his own stories, and to have the teacher's help on needed skills. It continues to be of importance when he starts reading his own books and those from the school library. Individualized reading promises much for each child. It motivates him to learn to read and write and permits him to succeed on his own, thus building a self-concept that he is a reader: He can read, and reading is valuable to him.

Smaller Classes Needed

Classes in many elementary schools should be smaller than at present. It is impossible for teachers to see children as individuals while working with 30 or 35 pupils. There is too little time in large classes, even when such classes are broken into small groups, for each child to have the attention and help he often needs. It may well be that problems in beginning reading which start in large classes in the early grades are responsible for many negative attitudes toward school and toward learning in later years.

---

[1] Lillian Gore. "The Nongraded Primary Unit." *School Life,* March 1962.

Inservice programs for teachers represent an important consideration for administrators and supervisors. Many elementary school teachers need continuing help in the form of specific instruction and information on the following phases of the reading program:

- **Diagnosing strengths and needs of children in reading**
- **Making the best use of basal reading materials**
- **Meeting the individual needs of pupils**
- **Teaching phonic and structural analysis**
- **Conducting directed reading activities**

Inservice education should be planned cooperatively with teachers. School time should be allotted for teachers to participate in the planning, actual study, and evaluation of the program. Use can now be made of television, permitting more teachers to participate in inservice programs and at the same time stay in their schools rather than reporting to a central meeting place. Films, filmstrips, and tape recordings can be used successfully. Procedures using laboratory sessions, demonstrations followed by discussion, and planned study have been found to be more satisfactory than lectures alone. Teachers who work with a reading specialist in a planned program over a period of time—1, 2, or 3 or more years—develop skill and interest in the teaching of reading. They also gain much confidence in their own ability to teach reading.

Supportive Personnel

Adequate supportive personnel are essential if the teacher of reading is to do a superlative job. School librarians who like children as well as books and who have well-equipped libraries in which to work are essential in good reading programs. A secretary or school clerk to type children's stories (until they are able to type or write their own) and to help them make their own first reading books may free the teacher for more professional activities. Specialists—doctors, pediatricians, remedial reading experts, and psychologists—who help to determine the best possible programs for children with special learning needs have proved of great value. Such personnel become important in the plans of the supervisor as he works to promote a more effective reading program for all children.

The education of parents is another important aspect of a successful reading program. Many parents are afraid to help or even to encourage their children in reading. They have been told to keep hands off, but parents can do much to help children read if they can learn what is being done, what their children need, and what they themselves can do. Children progress more satisfactorily when parents approve, appreciate, and understand the school program.

A final consideration of the curriculum planner should be to discover ways and means of evaluating and using, in accordance with his particular needs, the vast array of research in reading. It is very easy to hold on to ineffective methods merely because they have seemed to work. They must be reevaluated and supplemented with new and different approaches. New goals such as "every child using materials on his reading level" or "helping each child become a reader" often call for new procedures in teaching and learning. Teachers too often have little time to seek out research on a particular phase of reading. Keeping teachers informed, encouraging them to use research, and planning needed programs cooperatively with them will continue to be the challenge of the curriculum planner in the years ahead.

A LOOK AHEAD BY THE RESEARCH DIRECTOR

HELEN M. ROBINSON

WITHOUT A CRYSTAL BALL, it is necessary to predict future research on the basis of present trends as seen by the limited view of the writer. Two trends, in the area of beginning reading, appear to be worth noting: (1) General uneasiness and dissatisfaction in respect to the reading progress made by most pupils at the primary grade level, and (2) genuine interest on the part of persons in related disciplines, such as sociologists, psychologists, psychiatrists, neurologists, linguists and those concerned with child development. From these trends, one might predict that ingenuity and imagination will result in research techniques that are appropriate for investigating the many factors which determine successful beginning reading.

Inherent in the foregoing trends is concern about the general lack of respect for much of the reading research done in recent years. Careful review of the large volume of research during the last 3 years offers some tentative explanations for this unfortunate attitude:

1. Most investigations appear to be based upon comparisons involving standardized tests, while very few attempt to probe beneath surface changes or to determine what caused the changes.
2. The recurrent suggestions for further research made by investigators concern the process of learning to read, rather than the product, or what has been learned; however, few studies have attempted to deal with processes of learning to read.

Dr. Robinson, professor of education at the University of Chicago, is best known for her personal contributions to reading research and for her comprehensive, annual summaries of research in reading.

She acknowledges the weaknesses and limitations of much reading research, past and present, and predicts an improvement in the choice of research topics and in research design. She believes that new teaching methods will be concerned less with what is best for the majority and more with what works most effectively with certain types of learners.

Dr. Robinson urges that results of exploratory research be confirmed through replication before being released to the profession. She feels that such a policy would bring about sounder teacher-education programs.

3. Many investigations are inadequately controlled, and the investigators give little recognition to various contributing or detracting factors.
4. Few studies continue over a sufficient length of time to determine the long-range effect of experimental conditions which may have yielded temporary spurts in learning.
5. Published reports of research are being reduced to such a minimum of space that it is impossible to replicate a study or even to determine whether the procedure is really ready to be applied in the classroom.

Looking ahead, I foresee improvement in choice of research topics and in general research design. Investigations will be replicated so that conclusions reached will be both dependable and defensible. Such careful research should significantly influence future practices.

In the remainder of this paper, only three significant aspects of future research relating to beginning reading can be noted. The first two are addressed to problems already considered in this conference, while the third concerns techniques of research.

Beginning To Read Early

The age at which children can learn to read is currently being tested in many centers. Concern with this problem is due in part to the discontent which parents and some teachers have expressed about progress in the primary grades. In part, it reflects the general social pressures of our times, especially the urgency for speed in completing the school curriculum. As Dr. Gates has already pointed out, the recurring problems of age of beginning reading assume new dimensions today, with the advent of new media such as television and teaching machines.

Undoubtedly, research will demonstrate again that many children *can* learn to read before the age of 6 years. However, such findings are likely to be confusing to the practitioner unless related problems are also investigated. The immediate and long-range effects upon children who are taught to read at ages 3, 4 and 5 should be studied. Immediate concerns might include the attitude of pupils toward reading, their concept of what reading is and what it does for them, their levels of tension and frustration or possible satisfaction resulting from early reading, their growth in language, and the effects on their visual and auditory development.

Long-range studies of early reading, to be convincing, should demonstrate the continued superiority of pupil achievement as a result of early instruction. If pupils instructed in reading at a later age learn at a more rapid rate and catch up with the early beginners at the middle-grade or junior high school levels, it seems likely that little advantage will have been shown. Investigations should include not only achievement, but also the relative effects of early instruction on pupil interest in reading and the satisfaction resulting from reading. It is conceivable that very early instruction might enhance for some children, but diminish for others, the desire to read.

Furthermore, the study of individual children who succeed, or fail to make progress, may offer new insights into what constitutes reading readiness. The frequently recognized factors of general intelligence and level of language development, as well as social and emotional maturity, should be supplemented by appraisal of abilities such as visual and auditory perception, level of concept development, and the ability to abstract and generalize. Such research might be useful in differentiating the age at which each pupil could profit most from instruction.

Finally, should results reveal that there are general advantages to beginning reading instruction for most children at an early age, schools may need to determine whether it is practical to duplicate the experimental instructional conditions. At the San Francisco meeting of the International Reading Association, Dr. Jack A. Holmes hypothesized, from his analysis of prior research, that age of learning to read is a function of class enrollment. He showed that children under age 6 must be taught in very small groups, and that younger ones may even require individual instruction. Future research is needed to investigate both desirability and practicality of early reading instruction.

Further study of the optimum age for beginning reading instruction should include research which answers a number of questions: How much can be accomplished? What conditions and which combinations of pupil abilities are best? What are the immediate and long-range effects? Is it practical for schools to carry on such programs?

Teaching Beginning Reading

It is anticipated that future research dealing with methods of teaching beginning reading will be more carefully designed and controlled than many recent studies have been. The Hawthorne effect should be controlled; the effectiveness of teaching and the time devoted to reading need to be equalized; the abilities and backgrounds of children should be matched, while quantity and range of materials should be similar. Long-term studies are needed in this area, and they should include a variety of techniques of evaluation rather than standardized tests alone.

should be made available to other researchers in the field, but not recommended for practice until after adequate replication. If this plan is adopted in the future, sounder programs of teacher preparation will emerge.

Concluding Statement

In the next decade, I foresee fewer research reports but better designed investigations. Since the studies will probably be of longer duration than at present, reports may not occur at such frequent intervals. Exploratory studies, especially directed toward a better understanding of the learning process, should be refined and replicated before they are recommended for practice.

Expansion of investigational methods may very well reveal additional aptitudes basic to the mastery of reading. Methods of teaching may then be designed to match such aptitude patterns and introduced whenever instruction is likely to be most effective. Evaluation may be made on the basis of broad procedures for assessment over a number of years.

Future practice in teaching beginning reading can and should be influenced by sound research. I trust that we can look ahead to an era much more productive and enlightening than the one extending from 1900 to 1963.

APPENDIX

Conference Participants

OTHER DISTINGUISHED PARTICIPANTS took part in the conference on "Teaching Young Children To Read." They subjected the ideas presented in the foregoing papers to careful scrutiny and discussion, and contributed much to the overall tone and significance of the conference. The participants included the following:

DR. IRA AARON
Professor of Education
University of Georgia
Athens, Ga.

DR. EMMETT A. BETTS
Research Professor
School of Education
University of Miami
Coral Gables, Fla.

MR. WILLIAM BILLUPS
Elementary School Principal
Board of Education
Detroit, Mich.

DR. LOIS BING
Optometrist
3550 Warrensville Center Road
Shaker Heights, Ohio

DR. MORTON BOTEL
Past President
International Reading Association
Bucks County Public Schools
Levittown, Pa.

DR. DONALD CLELAND
Director, Reading Center
University of Pittsburgh
Pittsburgh, Pa.

DR. FRANK D. COSTENBADER
Ophthalmologist
1605 22d Street NW.
Washington, D.C.

DR. ELIZABETH GILKESON
Bank Street College of Education
69 Bank Street
New York, N.Y.

DR. MARGARET GILL
Executive Secretary
Association for Supervision and Curriculum Development
1201 16th Street NW.
Washington, D.C.

MR. ALFRED S. HAYES
Assistant Director of Research
Center for Applied Linguistics of the Modern Language Association
1346 Connecticut Avenue NW.
Washington, D.C.

DR. JAMES L. HYMES, JR.
Professor of Education
University of Maryland
College Park, Md.

DR. REGINALD LOURIE
Psychiatry Clinic
Children's Hospital
Washington, D.C.

DR. GEORGE MANOLAKES
Chairman, Early Childhood Education
New York University
New York, N.Y.

My extremely limited involvement in preparing programed materials suggests myriad problems for future investigation. For example, it seems likely that the mechanical aspects of reading can be programed, but so far I have many reservations about prepared self-teaching materials to develop interpretation, without provisions for discussion and teacher guidance. One of the advantages of programing materials is that the very act of programing forces one to check his assumptions about the proper sequence for reading skills development. Although many different sequences are possible, the best sequences are yet to be determined. One of the most promising features of programed materials is the opportunity afforded the investigator for understanding processes involved in learning to read. A second feature is the possibility of varying some conditions while all others remain constant. For example, a program may be directed by a man's voice or a woman's voice and the effects of this small change evaluated, without the effects of teacher personality.

As Methods Change

New methods of teaching, rather than a revival of old methods, may characterize the next decade. Each new method should be subjected to rigorous study to determine its worth for groups of children. Furthermore, we must identify specific features of new techniques which are especially productive. The ultimate result may be a combination with methods of instruction now practiced rather than a complete change.

I foresee increased attention to the design of teaching methods and procedures to fit not just the average child, but specific groups of pupils with similar patterns of aptitudes. With greater precision in determining significant aptitudes, pupils might be grouped according to perception skills, which they use most successfully, or according to common patterns of visual perception or some more significant aptitudes. Such developments would shift the focus of research from what is good for the most to what is best for certain types of learners.

Intensive interest in the learning problems of the culturally disadvantaged undoubtedly will continue. Sociologists and linguists should be enlisted in exploring these problems. We need to know more about the deficits in reading readiness of the culturally disadvantaged. It will be necessary to devise and test techniques of compensating for experience, language development, types of intellectual stimulation, or whatever is needed to give such pupils an opportunity to learn to read successfully. I anticipate that a number of fruitful investigations will appear in this area.

A few forecasts of research dealing with methods of teaching beginning reading have been made. Other topics could be mentioned, but unforeseen aspects are likely to appear as research takes on broader dimensions.

Improved Research

Reading-readiness tests are certain to change in the future. Promising new types of measures of several aspects of readiness have already begun to appear. A search for differential aptitudes among young children should produce better tests—perhaps longer than those we now use and quite unlike them.

Standardized reading achievement tests have long been the major tool of reading research. Cursory examination of primary-grade reading tests reveals that they are directed almost entirely toward recognizing words and answering detailed questions. If they are to serve future research, ingenuity should be exercised in adding other dimensions to these tests.

Additional techniques such as rating scales, questionnaires, and incomplete statements of a projective type may be adapted for the study of other facets of reading. The structured interview already shows promise for investigating such problems as the beginner's concept of reading and his attitude toward reading. Researchers using these less conventional techniques are faced with the problem of quantifying and objectifying their findings. Such problems are not insurmountable, however, and the insights into children's learning may be greatly enhanced by using a wider variety of techniques.

New means for processing data will appear as the electronic age continues its unprecedented pace. An investigator who wishes to use a larger and wider sample of pupils may do so without undue concern over time.

Data which are less objective than test scores can now be processed by machine. It is possible to handle a large number of variables for individual pupils in order to identify patterns of abilities. The combination of additional techniques of study and of improved ways to handle data will surely be reflected in future research.

Results from exploratory research should be confirmed by replication before being released to the profession. This procedure is always followed in medicine and other scientific areas. If such a plan were followed in reading, the research would not be so confusing to teachers in training or even to experienced teachers. Exploratory research

Miss Alberta Meyer
Executive Secretary
Association for Childhood Education
3615 Wisconsin Avenue NW.
Washington, D.C.

Sir James Pitman
Member of Parliament for Bath
39 Parker Street
London W.C. 2, England

Mrs. Nancy Rambusch
American Montessori Society
18 West Putnam Avenue
Greenwich, Conn.

Dr. George Spache
Director, Reading Clinic
University of Florida
Gainesville, Fla.

Dr. Ethel Thompson
Consultant for Elementary Education
National Education Association
Washington, D.C.

Dr. Myrtle Townsend
Camden County Helping Teacher
111 Melrose Avenue
Westmont, N.J.

Dr. Priscilla Tyler
Associate Professor
English Education
University of Illinois
Urbana, Ill.

Mr. Charles Wingo
Professor of Education
Monmouth College
Monmouth, Ill.